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ABSTRACT

The educational model presented in this document synthesizes behavioral and developmental orientations in order to address certain school problems of low-income children. These problems include poor reading, math, and language arts skills; insufficient problem solving skills; and inadequate parent involvement and influence in children's formal education. The document outlines the major components of the model, provides methods to implement and evaluate the model, describes how the model was designed, gives results of evaluation data collected at two sites which adopted the model, and discusses the process whereby the University of Kansas implemented the model. Also included are various examples of key experiences for different grade levels. (DB)

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High/Scope Educational Research Foundation

600 North River Street
Ypsilanti, Michigan 48197
(313) 485-2000

David P. Weikart, Ph.D.
President

U S DEPARTMENT OF HEALTH,
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High/Scope - University of Kansas

Joint Model Study Project

Final Report

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High/Scope Educational Research Foundation
600 North River Street
Ypsilanti, Michigan 48197

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FOLLOW THROUGH MODELS WORK TOGETHER: A LOOK AT THE PROCESS

During 1978-79, two Follow Through sponsors, the High/Scope Foundation and the University of Kansas, worked together on a unique project. Its goal was to study the feasibility of synthesizing two very different educational models—the High/Scope Cognitively Oriented Curriculum and the University of Kansas Behavior Analysis Model—and to design a joint model "on paper." Results of the project suggest that such collaborations between Follow Through sponsors can be very productive. During the study, careful attention was paid to the collaboration process. Some of the observations project staff have on this are shared in the following excerpts (edited) from the Final Report of the Joint Model Study Project. *We hope that others in the Follow Through community contemplating collaborative work can glean some useful insights from the Kansas-High/Scope experience.*

The Joint Model Project

Can the advantages of educational models be enhanced by synthesizing or otherwise combining more than one model? Most model developers feel that a "more the merrier" eclecticism is suspect, because it violates the consistency and coherence that mark the major contributions of comprehensive educational models. Certainly it is easy to see how models based on very different theoretical and methodological assumptions could conflict rather than support one another if used in the same classroom.

It is not surprising, then, that the Joint Model Study Project, the goal of which was to conceptually synthesize a behaviorally-oriented and a cognitive-developmentally-oriented model, encountered a stimulating intellectual challenge. To some, the two models might appear incompatible in their orientations and methods. For example, in High/Scope classrooms students are encouraged to make choices and plan their own activities. Behavior Analysis classrooms, on the other hand, are more structured and utilize carefully sequenced basic skills curricula in which a day's activity (the material covered) is determined by the progress made in the previous day's work.

The two sponsors have used their differences to advantage in forging an educational model. In this Joint Model the original models complement rather than compete with one another. From Behavior Analysis comes the curricula and instructional methods relating to developing skills in the basic academic areas—reading, writing, and arithmetic; from High/Scope comes the plan-work-represent-evaluate sequence of the Cognitively Oriented Curriculum. The Joint Model complements the High/Scope program by adding some instructional procedures and materials that have been proven effective in developing basic skills. It complements the Behavior Analysis program by adding a generalized problem-solving curriculum that is also designed to provide a highly motivating and "concrete" context for the application of a broad range of skills. Although initially not certain that two very different approaches to education could be joined together in a productive way, the representatives of the two model sponsors who participated in this project now feel eager to see the Joint Model tested in practice.

The Process; How it Actually Happened

The first step in the process of designing a Joint Model was for High/Scope and Kansas staff to familiarize themselves with the essential components of each other's models. Materials describing the theoretical bases, classroom procedures and training procedures of each model were exchanged. High/Scope arranged for some of the Behavior Analysis staff to observe in the High/Scope Training and Demonstration classroom, and one Kansas staff member was also able to participate in a training workshop High/Scope was conducting for its field personnel. Each model prepared a "working paper" outlining the goals and essential elements of their models. As a side benefit, each group found that explaining their program to staff of another model enabled them to further define and clarify for themselves the essentials of their own models.

Another primary focus of early work in the project was to identify similarities between the two models. Using the "working papers" each group had prepared, Kansas and High/Scope staff met to outline similarities in classroom practices, expectations for children, teachers, trainers and support personnel, training techniques, etc.

Data collection was another phase of Joint Model Development. New child outcome and consumer satisfaction data were collected at one field site using the Kansas model and another using the High/Scope Model. The results confirmed, to some extent, the assumption that the Behavior Analysis Model is highly effective in producing student achievement, and that High/Scope students are more likely to excell in measures of written productive language than on standardized achievement tests. The results also confirmed that each of the "first generation" models is highly successful in producing student satisfaction in school.

Another major step in the process was for staff of each model to produce a proposal for how they thought the Joint Model should be designed. These papers were exchanged and studied. Following this, a meeting was held in which the group generated goals and objectives for a Joint Model, and identified the possible technologies needed to achieve these goals. The following steps were used:

1. The group drafted the following statement of problems to be solved by the Joint Model, specifically the problems of children in need of compensatory education.

o Children don't gain sufficient basic academic skills: reading, math, and language arts.
o Children don't gain sufficient problem-solving skills.
o Children don't gain sufficient ability to apply skills to real-life situations: both academic and problem-solving skills.
o Children don't gain a sufficient sense that they are responsible for their actions and have control of their lives.
o Children don't gain the capacity to work and plan effectively with others.
o Children don't develop a broad range of interests and skills.
o Parents are not sufficiently involved and do not have sufficient impact on their children's education.

2. A statement of the objectives for a Joint Model (which is a corollary of the statement of the problems) was developed. This statement was fairly general in nature.

3. Next the group identified a pool of successful practices and techniques from each model that might be used by the Joint Model. The criterion for "successful" was support by data if possible. (Some initial findings from the field sites were useful here).

4. From the pool of techniques and practices identified in step 3, the group identified the practices and technologies that could best be used to reach the objectives of the Joint Model developed in step 2.

5. In the process of identifying the practices and techniques above, a more precise statement of goals was developed. These goals, with some exceptions, were stated in such a way that progress in attaining them could be readily measured.

Participants at the meeting also drafted a preliminary statement of the components of the Joint Model, which included some (but not extensive) specifics on the classroom program and the behaviors expected of children, teachers and trainers. In preparing this statement, the group developed a general outline for educational models which may be useful to others involved in model formulation. The outline included the following main headings:

I. Instructional Model
- *A. Principal Goals for Students*
- *B. Theory Base; Process Assumptions*
- *C. Curriculum (Subject) Areas*
- *D. Classroom Arrangement*
- *E. Daily Routine*
- *F. Staffing Pattern*
- *G. Role of Teacher and Other Classroom Adults*
- *H. Curriculum Materials*
- *I. Student Progress Monitoring Procedures*
- *J. Motivation Systems*
- *K. Accommodation to Individual Differences*
- *L. Instructional Team's Planning Procedures*
- *M. Methods for Assuring Cross-grade Continuity*
- *N. Parent Involvement and Home Learning*

II. Delivery System
- *A. Training*
- *B. Quality Control*

Once the basic elements of the Joint Model were defined, attention turned to the measures which might be used to assess the attainment of Joint Model goals in the event of an opportunity for implementation. It was decided that since the Joint Model was essentially a new model, it was important to measure the degree of implementation during the initial implementation phase.

The next phases of the work were directly tied to this decision. After preliminary data collection was complete, further discussions were held to determine ways to measure implementation and progress in curriculum areas, as well as to decide what further analyses of data might be done. The important aspect of this work in relation to the process of model development was that the group—who so far had avoided discussion of theoretical issues—was confronted with a substantive theoretical issue in relation to the progress measurement system. (See Recommendations 1 and 7 below.) Although this specific issue was not totally resolved at this point, staff did feel that it was more useful to discuss the issue in relation to the specific technology to be used than it would have been to raise the issue earlier.

Recommendations for Successful Collaboration

The following are some recommendations which we feel our experiences suggest to those contemplating model collaboration.

1. **Avoid initial discussions of the relative merits of different theoretical orientations.** Such issues can be more effectively dealt with later when designing specific technologies to be employed, e.g., progress measures. This recommendation is most relevant to collaborations between classroom models with widely divergent theoretical bases. (See recommendation 7.)

2. **Provide for more in-depth understanding of the models through participation in workshops and/or observation in classrooms.** Funds should be allocated for a staff member from each model to participate in workshops given by the other and to observe in model classrooms.

3. **Provide funds for meetings on a more frequent, regular basis.** Face-to-face discussion is important for resolving issues, especially those related to theoretical underpinnings of practice. For example, the issue of measuring child progress (other than reading and mathematics) was left unresolved because it was too difficult and sensitive to discuss by telephone or in writing. It is an issue that requires face-to-face discussion, and there simply was not enough money or time to resolve the issue to everyone's satisfaction. A three-day meeting on a bi-monthly schedule is suggested. This frequency may not be necessary for all collaborations.

4. **Follow a defined sequence of tasks.** A meeting to generate the goals and objectives should be held before writing the working papers designed to conceptualize a joint model. Remaining meetings could then be used for component specification, specification of expected behaviors of actors, and issue resolution. Review by the staff of each model as in recommendation 7 should occur on a regular basis after the working papers are exchanged.

5. **Provide funds for materials development.** Resolution of several problems depended on the development of curriculum materials for use in Joint Model classrooms.

6. **Consider implementation in initial evaluations.** In the event that this or any other collaboration should be invited to implement a "joint model," it is recommended that evaluation for the first year concentrate on implementation. We have learned from past evaluations that to measure outcomes before evaluating the degree of implementation can be misleading. It would also provide an opportunity to study, from an empirical standpoint, how the change process takes place. Measurement of progress toward full implementation could be used as formative data in the initial phases of the study. When there is evidence of implementation, outcome data such as child achievement measures could be used.

7. **Review model specifications carefully.** Once the initial specifications of the joint model are established, they should be thoroughly and independently reviewed with particular emphasis on how the model works: how the specifications relate to the goals of the new model, if the goals are stated in a manner that affords assessment, and if the expectations of teachers and students are realistic (i.e., to review the merits of the new model in relation to the theoretical bases of the original models).

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HIGH/SCOPE - UNIVERSITY OF KANSAS JOINT MODEL PROJECT: IMPLEMENTATION PHASE

Part One

THE JOINT MODEL FRAMEWORK

by: Bernard Banet

Ann Branden

Charles Hohmann

Gene Ramp

John R. Berrueta-Clement

Sheila Mainwaring

The Joint Model: Purposes

A basic rationale for educational models is that an integrated coherent and systematic approach to curriculum goals and methods at a particular level will give students and teachers a useful consistency and explicitness:

- Models can clarify the procedures and criteria for determining and revising learning goals, sequences, and related expectations, criteria and requirements.
- Models can clarify procedures and criteria for determining and revising teaching and learning methods.
- Models can help to clarify the relationship between goals and methods, on the one hand, and resource allocation on the other. Just what is needed in terms of staff, money, facilities, materials, equipment, etc. to accomplish a specific result.
- Models can explicitly provide alternative approaches to school learning that treat the instructional process differently from conventional methods.
- Models can explicitly address such issues as:
  - individual differences in interests, ability, and background (of students and teachers)
  - relationship of learning goals and methods across classes in a single grade and from grade to grade
  - source of motivation for learning
- Models can utilize a specific research and theory base and can contribute heuristically to new investigations.

Can these advantages of educational models be enhanced by synthesizing or otherwise combining more than one model? Most model developers feel that a "more the merrier" eclecticism is suspect, because it violates the consistency and coherence that mark the major contribution of comprehensive educational models. Certainly it is easy to see how models based on very different theoretical and methodological assumptions could conflict rather than support one another if used in the same classroom.

It is not surprising, then, that the Joint Model Study Project, the goal of which was to conceptually synthesize a behaviorally-oriented and a cognitive-developmentally-oriented model, encountered a stimulating intellectual challenge. Although initially not certain that two very different approaches to education could

be joined together in a productive way, the representatives of the two model sponsors who participated in this project now feel eager to see the joint model tested in practice. This section of the final report summarizes the conception of a Joint Model that was developed by the Joint Model Study Project.

As it emerged from the Joint Model Study Project, we feel that a joint model implemented in a school environment can effectively address the following problems for low-income children:

1) Children don't gain sufficient basic academic skills: reading, math, and language arts.

2) Children don't gain sufficient problem solving skills.

3) Children don't gain sufficient ability to apply skills to real life situations: both academic and problem solving skills.

4) Children don't gain a sufficient sense that they are responsible for their action and have control of their lives.

5) Children don't gain the capacity to work and play effectively with others.

6) Children don't develop a broad range of interests and skills.

7) Parents are not sufficiently involved with, and do not have sufficient impact on their children's formal education.

The features of the Joint Model are outlined below, with parallells to the two "first generation" models indicated.

The Joint Model: An Outline of Major Components

I. The Instructional Model

A. Principal Goals for Students

HIGH/SCOPE Cognitively Oriented Curriculum:

- Decision-making
- Self-discipline, goal selection
- Cooperation
- Skills and concepts in the arts, sciences, physical movement.
- Expression, communication, representation
- Reading and decoding symbolic representations
- Problem definition and problem solving
- Reasoning capacity in a wide range of contexts
- Spirit of inquiry, openness to knowledge and others view points.

UNIVERSITY OF KANSAS Behavior Analysis Model:

- High level of student achievement in the basic skills.
- High level of consumer satisfaction.
- High level of parent involvement.

JOINT MODEL :

Combines the above goals in the following way:

1. a) A high level of student achievement in the basic skills

   b) Expression, communication, representation

   - at least a year's progress for a year's time in reading and math skills.
   - by the end of G3 the median child will be at or above 3.9 in reading and math.
   - writing skills such as tested by the PLAT, will reach criteria similar to the above.

2. Problem definition and problem solving, reasoning ability as demonstrated by:

   - "plans"
   - representations
   - activity card sequence

3. Ability to apply skills to real life situations

   - effective use of tools, materials, peers and adults, resources, instructions

4. Self-discipline, goal selection, decision-making, independent study skills

   - task persistence
   - planning and contracting
   - self-inititation of activities

5. Cooperation with peers and adults, openness to points of view of others

   - eliminate aggression
   - helping behavior
   - cooperative work projects
   - roles in groups

6. Abilities related to arts, sciences, physical movement; spirit of inquiry and openness to knowledge

   - individual and unique pattern of choices
   - real competence in some areas

7. High level of student satisfaction with school and own achievement.

B. Theory Base; Process Assumptions

HIGH/SCOPE Cognitively Oriented Curriculum:

Developmental psychology theory base stresses that learning grows out of the child's active exploration and inquiry, motivated by curiosity and individual interests. Stresses importance of relating abstract representation to concrete experiences and importance of the developmental appropriateness of learning activities and goals. "Open framework" seeks to stimulate and integrate teacher and child initiative through the plan-work-represent-evaluate cycle.

UNIVERSITY OF KANSAS Behavior Analysis

Stresses basic skills mastery through use of sequenced curriculum materials. Explicit work and mastery targets are set regularly for each child. Progress is rewarded by "backup activities" selected by the child and negotiated in a "contract" or purchased with tokens. Behavioral psychology provides the theory base which emphasizes explicit positive incentives for performance, specific learning objectives and tasks, and frequent feedback to teacher and student on achievements.

JOINT MODEL :

Encourages basic skill acquisition through explicit curriculum sequences and work targets, consolidated through application in a wide range of contexts via the plan-work-represent-evaluate cycle. Combines curricular breadth of High/Scope model with elements of the sequentiality of learning activities in the Kansas model. Uses explicit incentives where necessary to motivate skill practice and mastery, while relying more on intrinsic motivation in the initial exploration phase and final application phase.

C. Curriculum (Subject) Areas

HIGH/SCOPE Cognitively Oriented Curriculum

- Language arts
- Construction/crafts
- Social studies
- Math
- Fine arts
- Science

UNIVERSITY OF KANSAS Behavior Analysis Model

- Reading
- Math
- Handwriting
- Spelling

JOINT MODEL :

All of the above, with handwriting and spelling possibly integrated with the planning and representation components of the plan-work-represent-evaluate cycle.

D. Classroom Arrangement

HIGH/SCOPE Cognitively Oriented Curriculum

Rooms divided into learning centers:

- Language:
  - library
  - bookmaking
  - newspaper office
  - games
  - printing
  - tape recording
  - poetry and playwriting
  - reading
  - typing
- Sociodramatic play:
  - "house" area
  - puppet stage
  - Stage for plays
  - "store"
  - (others)
- Math and Science:
  - electricity
  - sand table
  - games center
  - store
  - photography
  - mechanical systems
  - plant center
  - animal center
  - weighing and measuring
- Construction/crafts:
  - candle making
  - blocks
  - woodworking
  - batiking
  - macrame
  - sewing
  - beading
  - weaving
  - pottery
  - cooking
  - (others)
- Fine arts:
  - art
  - music
  - movement
  - drama
  - film making
  - dance
  - sculpture
  - (other)

UNIVERSITY OF KANSAS Behavior Analysis Model

Tables for four concurrent small instructional groups -- reading, math, handwriting, spelling.

"Back-up" area

JOINT MODEL :

Ideally, all learning areas from each model would be included in the Joint Model classroom layout. The actual number and type of learning areas may vary from classroom to classroom, according to the amount of space and facilities available. A Joint Model classroom requires a minimum of three areas -- one each for reading, arithmetic, and activity cards. At certain times an area may serve double duty. For example, if all children complete their reading plans before the end of the day, the reading area may be transformed into another activity card center.

E. Daily Routine

HIGH/SCOPE Cognitively Oriented Curriculum

- Plan
- Work
- Represent
- Evaluate
- Small-group time
- Large-group time

UNIVERSITY OF KANSAS Behavior Analysis Model

Morning:

- Sampling period -- wide array of potential backups freely available.
- First instructional period (four concurrent groups)
- Exchange time ("Back-up" activities)
- Second instructional period
- Exchange time
- Third instructional period
- Lunch

Afternoon repeats above pattern of alternating instruction and exchange with allowances for whole-class activities.

JOINT MODEL

Daily Routine

1. Arrive - Opening exercises
2. Adults and children go to centers (work stations and other).

- Children work on contracts as set at the end of the previous day or during the previous day.

  For example:

  1) Reading (book and pages as agreed) 20 minutes.
  2) Sewing (plan, work and represent) 1 hour.
  3) Math (book and pages as agreed) 39 minutes.

  + other school activities (lunch, music, PE, assembly)

- Staff and students go to learning areas as determined by student's plans and as space in the areas allows. In some cases staff may be moved to accomodate increased demand in particular areas.

- At the end of each child's stay in a work station a new contract for the next day is formulated with the help of the staff member supervising that station.

3. Evaluation--children and teachers scheduled activities for the next day.

F. Staffing Pattern

HIGH/SCOPE Cognitively Oriented Curriculum

1 teacher (certified)

1 aide

UNIVERSITY OF KANSAS Behavior Analysis Model

Team Teaching: Adult/child ratio permits target attainment

Grades K-1:	4 adults	a. lead teacher (certified)	- reading
		b. paraprofessional	- math
		c. parent	- handwriting
		d. parent	- spelling
Grades 2-3:	3 adults	a. lead teacher (certified)	- reading
		b. paraprofessional	- math
		c. parent	- handwriting spelling

JOINT MODEL :

Team Teaching: Adult/child ratio permits target attainment

G. Role of Teacher and Other Classroom Adults:

HIGH/SCOPE Cognitively Oriented Curriculum

- know each child
- stimulate interests and activities
- extend children's thinking and activities

UNIVERSITY OF KANSAS Behavior Analysis Model

- teach children the skills needed to progress through curriculum materials at individual rates, and according to targets.
- administer reinforcement contingent on good or improved performance in order to keep children on-task without using coercion or threat.

JOINT MODEL :

Adults follow pattern of model according to nature of subject area, time period, etc.

Teaching adults will be trained in the use of techniques designed to enhance progress toward model goals:

- classroom management
- instructional strategies
- team planning

H. Curriculum Materials

HIGH/SCOPE Cognitively Oriented Curriculum

Uses activity cards and teacher-created materials, plus interest center resources. Does not assume use of sequenced workbook activities.

UNIVERSITY OF KANSAS Behavior Analysis Model

Curriculum materials are judged for ability to teach basic skills. Book-and-page progress is clearly definable for each student individually.

JOINT MODEL :

Would use expanded set of activity cards, plus materials similar to those used in each "first generation" model.

I. Student Progress Monitoring Procedures

HIGH/SCOPE Cognitively Oriented Curriculum

Child Observation Record:

Teacher record of child progress, used several times a year.

Daily planning process also notes breakthroughs and problems of individual children.

UNIVERSITY OF KANSAS Behavior Analysis Model

Continuous Progress Assessment:

Frequent reporting of individual child book-and-page placements in curriculum materials with respect to individually-set year-end targets in each subject. Progress data are summarized in Weekly Individual Progress Report charts and in classroom status summaries. "Accuracy checks" insure content mastery.

JOINT MODEL :

WIPR would be used for basic skills progress. Progress through sequences of activity cards would be monitored. Measures would be created to permit closer monitoring of skill development in areas beyond those covered by current WIPRs.

J. Motivation Systems

HIGH/SCOPE Cognitively Oriented Curriculum

Intrinsic motivation is stressed. Opportunity to carry out one's own plans is seen as inherently motivating. Rich array of materials and developmentally appropriate expectations minimize need for explicit and systematic reward system.

UNIVERSITY OF KANSAS Behavior Analysis Model

Teachers systematically reward on-task behavior. Positive reward system creates atmosphere of encouragement, eliminates coercion. Children exchange tokens or specific work completion for enjoyable activities of their choosing, under either a token exchange or contract-for-reward system.

JOINT MODEL:

Will use intrinsic motivation where possible, combined with explicit performance criteria and work expectations. Motivation will be taught. On-task behavior will be reinforced with teacher attention and praise. All curriculum areas will contain a target-setting and progress monitoring system that will make learning progress and work accomplished visible to the student. For example, High/Scope's activity cards will be extended to present clearer work targets and evaluation criteria to students and teachers.

A daily contract/plan by each student will set goals for completion of basic skills materials as well as interest center projects. Ideally, children would be allowed to select sequence within which they work. However, children having difficulty meeting targets in any curriculum area might be required to work first in these areas.

K. Accommodation to Individual Differences

HIGH/SCOPE Cognitively Oriented Curriculum

The plan-work-represent-evaluate sequence invites children to select activities which reflect their interests. Teachers extend the child's actions and plans, rather than imposing a pre-sequenced set of activities. Observations of the progress of each child permit setting of new learning goals, to be achieved as part of the work cycle.

UNIVERSITY OF KANSAS Behavior Analysis Model

Stresses allowing children to proceed at different (but carefully monitored) rates through pre-sequenced basic skills materials. Lockstep progress is prohibited. Each child is rewarded for progress rates that insure he will not fall behind academically.

Children get individual attention as they work on basic skills materials in small group clusters, and choose their own activities during exchange periods.

JOINT MODEL :

Retains individualization techniques of both "first generation" models: KU individualization for skill-acquisition activities plus High/Scope individualization for interest center activities combined with more explicit progress monitoring and work targeting.

L. Instructional Team's Planning Procedures

HIGH/SCOPE Cognitively Oriented Curriculum

Teachers and aides plan small group activities and interest center options daily. They revise learning goals for particular children regularly, and periodically use Child Observation Record.

UNIVERSITY OF KANSAS Behavior Analysis Model

Teaching-team planning sessions occur daily to examine current performance data and set plans for future instruction.

JOINT MODEL :

Will combine above kinds of planning.

M. Methods for Assuring Cross-grade Continuity

HIGH/SCOPE Cognitively Oriented Curriculum

The same basic room and routine configuration is used from K through 3. The Key Experiences provide a consistent framework of goals, monitored by the Child Observation Record.

UNIVERSITY OF KANSAS Behavior Analysis Model

Curriculum materials are sequential. The same series is used throughout the Follow Through grades in a given school.

JOINT MODEL :

Would retain consistent basic skills materials and build on a single corpus of interest area activity cards.

N. Parent Involvement and Home Learning

HIGH/SCOPE Cognitively Oriented Curriculum

High/Scope has involved parents as paid aides and has utilized a parent coordinator. "Home teaching" has in the past been a High/Scope Follow Through component. Parents are encouraged to visit the classroom.

UNIVERSITY OF KANSAS Behavior Analysis Model

Parent Involvement: Participation by every parent in the education of their children.

1. BASIC PROCEDURE: Small Group Instructor

   Definition: A parent (relative or guardian) of a currently enrolled child who is trained and paid to instruct a group of children during instructional periods under the direct supervision of the classroom teacher.

2. BASIC PROCEDURE: A Parent Policy Advisory Committee

   Parents are a majority membership of a Policy Advisory Committee that helps formulate and implement all program procedures. All parents of enrolled children are members. The PAC manages its own budget; and it manages its own system for selecting, hiring and training parent employees.

JOINT MODEL :

The Joint Model will involve parents in all of the above. "Homework" for children will be examined as a possible additional component of home involvement in learning.

II. Delivery System

A. Training

HIGH/SCOPE Cognitively Oriented Curriculum

- Sequenced training (inservice)
- Curriculum guides
- Audiovisual materials
- Activity guides for teachers
- Internship weeks in Ypsilanti
- High/Scope consultants and local
- Curriculum Assistants assist classroom staff

UNIVERSITY OF KANSAS Behavior Analysis Model

Training

1. Trainers: District Advisor (sponsor representative) w/Staff Trainer (local project)
2. Trainees: Teachers, Paraprofessionals, Parents.
3. Training seqeunce in Demonstration and Training Classroom.
   a) practicum
   b) observation
   c) feedback
   d) in-service
   e) certification
4. Certification Areas
   a) teacher-student interactions (instructional criteria)
   b) curriculum progress of students
   c) non-instructional classroom activities (exchange criteria)

JOINT MODEL :

Would use resources from each of the above as applied to relevant components.

B. Quality Control

HIGH/SCOPE Cognitively Oriented Curriculum

High/Scope has developed the PLAT (Productive Language Assessment Tasks) as a student outcome measure and the Implementation Checklist for process monitoring by field consultants and curriculum assistants.

UNIVERSITY OF KANSAS Behavior Analysis Model

Kansas has used the WRAT and other standardized achievement tests to monitor project success at field sites. The criterion has been that students function at grade level or better in reading, math, spelling and handwriting, or make annual gains of at least one year.

KU uses the Annual Consumer Evaluation (ACE) to evaluate attainment of the goal of high consumer satisfaction on the part of children, teachers, parents, administrators.

Model "recognition" or implementation is monitored by field consultants.

JOINT MODEL :

The PLAT, WRAT, MAT (Primary 2 reading comprehension) battery used for the Joint Model Study Project data collection would be applicable to the Joint Model at second and third grade levels. The MAT Primer and Primary 1 levels might be used for K and First Grade quality control.

Implementation checklists would be developed.

The ACE would be used to evaluate consumer satisfaction of children, parents, teachers, administrators.

Part Two

The Joint Model: Its Implementation and Measurement

by Steve Ganz
Ann Branden
Daniel Schulte

It has previously been proposed that initial research on the Joint Model Project focus upon the process and outcomes of implementation. The model's proposed implementation will be monitored in three kindergarten classrooms. One of these is currently a Behavior Analysis classroom and two are currently High/Scope classrooms.

The purposes of this section are:

1. To review the importance of noting and interpreting differences in the implementation of the Joint Model;

2. To present the critical components of the Joint Model to be implemented;

3. To identify and predict possible differences in the implementation of the Joint Model between Behavior Analysis and High/Scope sites;

4. To specify the measurement of the Joint Model's components as they are implemented.

There are reasons to expect the Joint Model to be implemented differently in different classrooms. First, some variation in implementation is to be expected, and is desirable. It has been proposed (February meeting of the Joint Model sponsors) that teachers be involved in detailed decisions on implementation of the model. This is desirable because each classroom has unique needs and problems, as well as ensuring that teachers have an interest in the success of the Joint Model and its implementation. Second, although the Joint Model is intended to be a unitary educational system, it is realistic to expect variations in the actual implementation to reflect the previous orientations of the classrooms in which it is implemented. Such differences should occur particularly if the Joint Model is implemented in the middle of the school year, so that both the instructional team and the children are changing from their accustomed routines.

It is important to monitor the implementations of the Joint Model, and to note differences in the model as it is implemented at different sites. It will be useful to attempt to anticipate possible areas of difficulty in implementation within a given classroom. In this way particular difficulties might be altogether avoided, or if difficulties do occur, those persons involved will be better prepared to recognize and plan to provide additional training to correct the situation. It is also important for the researcher to predict a pattern and rationale for implementation differences in order to avoid an entirely post hoc analysis of the program's implementation. Finally, it is important to note differences in implementation that reflect successful variations of the Joint Model.

Before discussing differences in implementation of the Joint Model, several components of the model need specification. These aspects include curriculum, classroom layout, daily routine, and exemplary teacher and student behaviors. The description of these components which follows is a synthesis of documents and discussion between A. Branden, D. Schulte, and S. Ganz relating to prior Joint

Model sponsor meetings, and the future needs of the model.

Curriculum

Reading and Math will be taught in a manner adapted from the Behavior Analysis Follow Through classroom. A Cognitive Curriculum will employ activity cards embodying cognitive "key experiences" as prescribed by High/Scope. These activities will take the form of the "plan-do-represent-evaluate" sequence as adapted from the High/Scope classroom. Student progress in all curriculum areas will be monitored on a continuous basis.

Classroom Layout

The Joint Model classroom is conceived as having study centers reflecting the three aspects of the curriculum. One center will be for Reading, one for Math, and there will be several for the Cognitive curriculum. These latter centers will include facilities for carrying out the entire plan-do-represent-evaluate sequence.

The Daily Routine

The daily routine consists primarily of two types of activities; curriculum sessions and time budgeting sessions. During time budgeting sessions children will negotiate with teachers and then record the amount of time (and progress) they plan to devote to each of the three areas of the curriculum. This planning is done on the basis of the child's interests and prior progress in each curriculum area. If a child makes insufficient progress in one area, he may be required to contract a certain amount of time or progress in that area before contracting work in other activities. It has been proposed that young children will spend time in each of the three areas each day, while older children may wish to concentrate upon a task more intensely, doing perhaps only one or two activities per day (given sufficient progress in other areas). The time of these time budgeting sessions may be varied to suit aspects of a classroom's routine, but it has been suggested that the ideal time for this activity is at the end of the school day so that children may evaluate their day's progress and have their next day's plan ready to follow at the start of the next day's class.

Teacher Behaviors

Three main classes of teacher behaviors can be identified; behavioral management, instruction strategies, and implementation documentation.

Behavioral Management. The Joint Model classroom concept requires children to be self-motivating and give their full attention to their studies. The following teacher behaviors are designed to support these ends.

1. Explicit expectations. The teacher's expectations for student behavior are to be explicit. A list of classroom rules or pictorial reminders for behavior may be posted.

2. Minimal use of extrinsic reinforcement. Contingent teacher attention and praise are to be the dominant form of encouragement.

3. On-task reinforcement. Teacher praise and attention is liberally given to children explicitly for appropriate learning behaviors in all curriculum areas. Disruptive behavior is generally to be ignored until it becomes severe. There will be no coercion or corporal punishment.

4. Time-out. If disruptive behavior becomes a problem the disruptive child is separated from the rest of the class for a short time. Upon his return, attention and praise are immediately given for his on-task behavior.

Instructional strategies. These instruction strategies were chosen to maximally involve each child in the curriculum and to foster individualized study and interests.

1. Individualized instruction. Each child's progress in Reading, Math, and Activity Cards is individually paced. During instruction each child should receive individualized assistance and encouragement.

2. Extension questions. Teachers will ask questions designed to help children better understand, or complement their perspective on problems which they are considering.

3. Team planning. The instruction team meets to discuss individual children's cognitive development, behavior problems, and curricular progress, as well as to plan activities and to discuss their own instructional techniques.

4. Teaching children to plan. Teachers help children set weekly and daily targets and goals to meet.

5. Attention to cognitive development. During the plan-do-represent-evaluate sequences teachers observe behavior and infer the level of cognitive development for each child. Using this knowledge, teachers help children to choose appropriate but challenging activities so as to foster further cognitive development.

Implementation Documentation. As previously mentioned, teachers are to have some involvement in the logistics of implementing the Joint Model. In doing this, they will record their unique contributions to the model, their classroom's daily activities, and their perceptions and suggestions about the Joint Model's implementation.

1. Classroom innovations. Each classroom may have unique innovations consistent with the purposes of the Joint Model. Any innovations should be explicitly recorded and reported to district advisors and/or staff trainer/curriculum assistants.

2. Teacher's daily records. Each day the head teacher records class activities not related to the curriculum (such as roll call, milk break, fire drill), as well as special curricular activities (such as unusual class outings, group projects, or discussions).

3. Team planning session reports. During team planning sessions, several aspects of implementation are to be discussed. A report of each team planning session records which topics are discussed, as well as problems with, and possible solutions for, the Joint Model implementation.

Child Behaviors

Three main classes of child behaviors may be identified. They are time and progress monitoring, generalized learning skill activities, and study-concomitant social behaviors.

Time and progress monitoring. Children, with the help and guidance of teachers, schedule and monitor their learning behaviors.

1. Contracting activities. Children will preschedule their learning activities for an entire day, using the contract during the day to remind them of their commitments.

2. Student Weekly Activity Records. Students carry these records with them and record (with the help of adults if necessary) the time spent and progress made in each activity during the day.

Generalized learning skills. A large impetus for developing the Joint Model was that children would benefit from acquiring generalized learning skills. The plan-do-represent-evaluate sequence is believed to foster the development of cognitive skills and the child's self confidence to conceive and carry out plans.

1. Confidence in planning. Children should show increasing confidence in their ability to complete plan-do-represent-evaluate sequences. Increasing confidence might be observed as a progression of simple to more complex plans made by a child as the school term progresses. Confidence may also be reflected by an increasing ability to plan with progressively less assistance from adults.

2. Cognitive development. A progression of new cognitive skills should be present in children's learning activities, especially in plan-do-represent-evaluate sequences.

3. Key Experiences. Receiving guidance from teachers, children carry out activities outlined in the activity cards. This part of the curriculum will be carefully monitored to help set future behavioral standards for achievement.

Study-concomitant social behaviors. The Joint Model provides for children to facilitate one another's learning experiences with on-task social behaviors such as tutoring, or group planning.

1. Helping. Children may tutor each other in appropriate ways.

2. Questioning. Children may ask each other "extension questions" about each others projects.

3. Group projects. Children may choose to do activity card tasks with other children or by themselves.

Predictions of Implementation Differences Between Classrooms

It is reasonable to predict that characteristics of the Joint Model will be more difficult to implement within a given classroom when those characteristics are new to that classroom. For example, a former Behavior Analysis classroom may have difficulty switching from its token economy to "minimal use of extrinsic reinforcement" as specified by the Joint Model. Similarly, a former High/Scope classroom may have difficulty implementing the math curriculum taken from the Behavior Analysis Model. In general, it seems prudent to predict possible difficulties in implementation to occur in those components of the Joint Model most alien to that classroom. Table 1 presents a pattern of implementation difficulties predicted in the way for Behavior Analysis and High/Scope classrooms implementing the Joint Model.

In addition to these possible differences in implementation reflecting difficulties in adjustment, it is reasonable to expect other between-model differences to occur. Several of the Joint Model's components are not derived from either the Behavior Analysis or the High/Scope models. Still other components are derived from both. There may exist biases which may affect the implementation of these ambiguous components such that these components are reconizably different between Behavior Analysis and High/Scope classrooms. No direction is hypothesized for these differences because none is obvious. In Table 1 the components are identified by marks in the "unspecified differences" column.

Joint Model Components, Sources, and Possible Implementation Differences

Model Components	Sources	Between-model Differences		
		Difficulties		Unspecified
		BA	HS	
Curriculum				
Reading	BA		x	
Math	BA		x	
Activity Cards	HS	x		
Classroom Layout				
Curriculum centers	HS, BA			x
Daily Routine				
Time budgeting	HS, BA	x	x	
Time spending	HS, BA	x	x	
Teacher Behaviors				
Behavioral management				
Explicit expectations	BA		x	
Minimal extrinsic reinforcement	HS	x		
On-task praise/attention	BA		x	
Time-out appropriate	BA, HS	x	x	
Instructional strategies				
Individualized instruction	HS, BA			x
Extension questions	HS	x		
Team planning	HS, BA	x	x	
Planning guidance	HS, BA			x
Cognitive development	HS	x		
Implementation/Documentation				
Classroom innovation	JM			x
Daily Record	JM	x	x	
Team Planning Session Reports	JM	x	x	x
Child Behaviors				
Time & progress monitoring				
Contracting activities	HS, BA			x
Activity recording	JM			x
Generalized learning skills				
Confidence in planning	HS	x		
Cognitive development	HS	x		
Key Experiences	JM			x
Study-concomitant social behavior				
Helping, tutoring	JM			x
Questioning	JM			x
Group projects	JM			x

TABLE 1

Measuring the Implementation

There are three basic purposes in measuring the implementation of the Joint Model:

1. To describe the extent to which the model as designed has actually been implemented;

2. To measure differences within Joint Model classrooms over time;

3. To measure implementation differences between Joint Model classrooms.

To meet these requirements the measurement devices must not change from classroom to classroom, or over time; that is, they must be standard. They must reflect qualitative as well as quantitative facets of the implementation; that is, they must be varied. Finally, they must be easy to use repeatedly. In many cases those best able to measure the implementation will be the teachers and students who are in the classroom every day.

The top of Table 2 presents the components of the Joint Model along with the devices which may be used to measure their implementation. In some cases more than one device has been listed to measure a single component. The best device for each job has yet to be determined, and at this point in time it seems wise not to limit the options unnecessarily. In some cases, the devices for measuring Joint Model components have not yet been developed. These devices are indicated in the bottom part of Table 2. Also in the bottom part of Table 2 are the abbreviations and full names of devices to measure the Joint Model implementation.

Joint Model Components and their Measurement

Model Components	Measurement Devices
Curriculum	JMIC, WIPRs
Classroom Layout	JMIC
Daily Routine	TDR, SWAR, SAC
Teacher Behaviors	
Behavioral management	
Explicit expectations	JMIC
Minimal extrinsic reinforcement	OF
On-task praise & attention	OF
Time-out appropriate	OF
Instructional Strategies	
Individualized instruction	SWAR, SAC, OF, WIPRs
Extension questions	OF
Team planning	TPSR, Minutes
Planning guidance	TPSR, SAC
Cognitive development	TPSR
Implementation/Documentation	TPSR, TDR
Child Behaviors	
Time & progress monitoring	
Contracting activities	TPSR, SAC, SWAR
Activity recording	SWAR
Generalized learning skills	
Confidence in planning	CCE, SWAR, SAC
Cognitive development	TPSR
Key Experiences	ACM, TPSR
Study-concomitant social behavior	
Helping, tutoring	TPSR, OF
Questioning	TPSR, OF
Group projects	TDR, TPSR

Abbreviations:

JMIC	Joint Model Implementation checklist (not yet developed)
TDR	Teacher's Daily Record
SWAR	Student Weekly Activity Record
SAC	Student Activity Contract
OF	Observation Form
CCE	Child Consumer Evaluation
ACM	Activity Card Metric
OF	Child observation form (not yet developed)
TPSR	Team Planning Session Record

TABLE 2

Student Weekly Activity Record

This form, developed specifically for the Joint Model, is intended to record how much time is spent, and how much progress is made by each individual child, in each of three areas of the curriculum during each school day. This time and progress information will be especially useful in evaluating the relative ease or difficulty of the various new Key Experience activity cards. Further, this information will assist the child and teacher in future time and progress planning. As can be seen on the following sample, each Student Weekly Activity Record provides on a single sheet of paper a summary of the child's activities and progress for one week.

Student Activity Contract

The Student Activity Contract is intended to be used in conjunction with the Student Weekly Activity Record. Before beginning a week's work, each child sets goals to meet at the end of that week. Daily targets are then set so as to meet or surpass weekly goals. Student Activity Contracts will be negotiated between students and teacher at first, and when child skill and confidence increase the child may plan his activity contract more independently. Student Activity Contracts will provide information about children's confidence in planning, about study preferences, and when combined with information from Student Weekly Activity Records, about children's complex abilities to effectively carry out plans of their own design.

STUDENT WEEKLY ACTIVITY RECORD

Week beginning _____

Student name _____

Activity		Monday 1	Monday 2	Monday 3	Tuesday 1	Tuesday 2	Tuesday 3	Wednesday 1	Wednesday 2	Wednesday 3	Thursday 1	Thursday 2	Thursday 3	Friday 1	Friday 2	Friday 3	Summary
READING	begin																
	end																
	book																
	page																
MATH	begin																
	end																
	book																
	page																
Key Experiences	begin																
	end																
	card #																
Other																	

Student Activity Contract

Week begining _____
Student name _____

Activity	Goals for Friday	Daily Targets: Monday	Tuesday	Wednesday	Thursday	Friday	Goals met?
Reading book page							
Math book page							
Key Experiences Cards							
Other							

Teacher's Daily Record

This form records class activities other than individual studying. Such activities might include the entire class, such as during assemblies or recesses, or noteworthy curricular activities such as doing activity cards in groups of two or more children. The Teacher's Daily Record also notes overall class activities progressing through the day, noting when children begin planning, when they disperse to study centers, and when study activities are interrupted by other activities, such as fire drills, etc.

Team Planning Session Checklist/Record

The Team Planning Session Record represents an adaptation of Team Planning Session Checklists previously employed by Behavior Analysis Follow Through. There are two broad purposes to the checklist. The first purpose is to provide a framework for discussion during the session. The second purpose is to record important aspects of the discussion. This type of recording is intended to provide important qualitative evidence on aspects of the model not readily apparent to an observer paying a short visit to the Joint Model classroom.

Teacher's Daily Record

Date _____

Time	Activity	Comments

Team Planning Session Checklist/Record

Date _____ Yes No

1. All team members in attendance?

2. Were the following items discussed?

   A. Additions, corrections, questions about previous sessions.

   B. Individual child progress in curricula.

   C. Individual child social skills, behavior problems.

   D. Teacher skills.

   E. Joint Model implementation, improvements.

3. Were discussions based upon concrete examples (data or anecdote)? for,

   A. Individual child progress in curricula

      1. WIPR's Activity Card Metric

      2. Do any individuals need more time in particular curricula?

      3. Cognitive advances. (Specify on reverse side.)

      4. New interests applied to Key Experiences?

      5. Possible group projects, interests.

      6. Do any children need more help in planning?

   B. Individual child social skills, behavior problems.

      1. Children sharing ideas, asking questions?

      2. Are children working on Activity Cards alone or together?

      3. Any behavior problems?

   C. Teacher skills

      1. Methods of coping with behavior problems.

      2. Extension questions.

      3. Activity Cards assistance.

   D. Model Implementation, improvements.

      1. Problems (Specify on reverse side).

      2. Improvements, innovations (Specify on reverse side)

Teacher Observation Form

The Teacher Observation Form is adapted from a similar document in use by Behavior Analysis Follow Through. It has been adapted by omitting items not relevant to the Joint Model. Added relevant items include the occurrence of comprehension and extension questions, and interruptions of the child process. The Joint Model specifies that teachers ask "extension questions" intended to extend a child's perspective about a problem. Comprehension questions are those that require the child to express what he already knows. The Joint Model also specifies that the child process (plan-do-represent-evaluate) not be interrupted by teachers. Since it was suggested that it might be important to encourage teachers to make contacts with children in a random manner, space was provided for assessing the randomness of teacher contacts. However, no clear criteria for this behavior have been identified.

Teacher Observation Form

Date _____ Teacher _____ Observer _____

1. ON-TASK OBSERVATION

Time Began _____ Time Ended _____ Total Time _____

Number of Children in Group _____

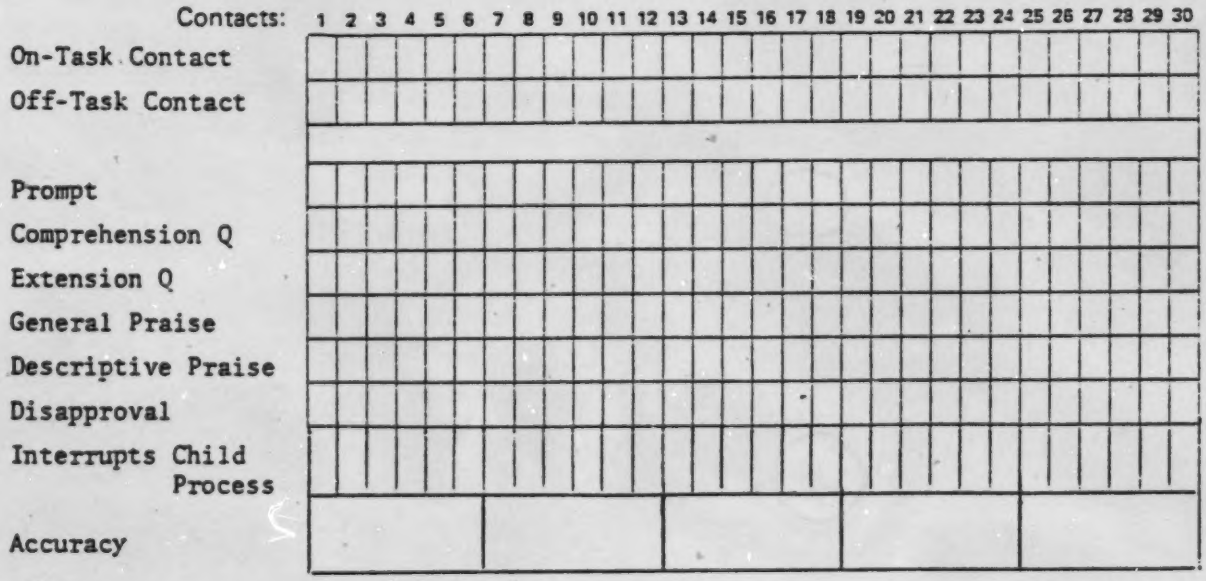
Minutes: 1_____ 2_____ 3_____ 4_____ 5_____

6_____ 7_____ 8_____ 9_____ 10_____

$$\text{Percent On-Task} = \frac{\text{Number of children On-Task}}{\text{Number of children in group} \times 10\text{(min.)}} = \_\_\_\_\_$$

2. Teaching Observation

Time Began _____ Time Ended _____ Total Time _____


Contacts: 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30
On-Task Contact
Off-Task Contact
Prompt
Comprehension Q
Extension Q
General Praise
Descriptive Praise
Disapproval
Interrupts Child Process
Accuracy

3. Summary

	Yes	No
80% Children On-Task		
100% On-Task Contacts		
100% Contacts contain Praise		
90% Prompts & Questions contain Descriptive Praise		
0% Disapprovals		
0% Interruptions of Child Process		
Time-out (if used) is used appropriately		
Contacts appear Random		

Miscellaneous Loose Ends

There are still a number of Joint Model components to be specified, along with devices to measure them.

Activity Cards Metric

A short description of the Activity Card Metric as designed by D. Shulte appears at the end of this paper.

Child Consumer Evaluation

At the end of the year the children will be asked the following questions:

1. How much do you like reading?
2. How much do you like math?
3. How much do you like school?
4. How happy does it make you feel?

Child/Child Observation Form

Child/Child Interactions. One area discussed in the February Joint Model meeting concerns the importance of child/child interactions. It was agreed that the students' social development is a goal of the Joint Model. Several strategies were discussed, including peer tutoring and children working together on activity cards.

We have, over the past few months, discussed the problem of observation of child/child interactions. The discussions resulted in the following list of questions that must be answered if an observation instrument is to be devised.

1. What are the desired child/child interactions? e.g., social, instructional, other?
2. What are the precise behavioral definitions of the interactions?
3. What is the specific goal of measuring child/child interactions, i.e., can criteria be set so that it is clear when the goal has been met?
4. Are there qualitative differences in interactions?
5. Can the qualitative differences be defined and criteria for attaining desired behavior established?
6. If no criteria are established, would there be merit in observation to ascertain the number of interactions without intervention?

Activity Card Metric

Development of the activity card WIPR, i.e., the manner in which the progress of the children in the learning centers can be monitored on a regular and continuous basis has been the most difficult area of work encountered. One proposal for this metric has been done which includes a rationale, method and possible charting procedures. The proposal was a start; however, continued work and discussion is necessary before a tentative WIPR can be designed. The actual utility of the procedure developed will only be known if and when the Joint Model can be implemented. Progress data from a one year implementation at each grade level will be necessary in order to finalize the metric.

A Metric for Monitoring Key Experiences

One component of the Behavior Analysis Follow Through (B.A.F.T.) program is the system designed to monitor child progress. One element of the Cognitively Oriented Curriculum is the acquisition, through various activities, of "key experiences," which contribute to the development of essential abilities in the children. The purpose of this paper is to propose a way to monitor the presentation and acquisition of key experiences.

Key Experiences

"The following key experiences have been found to support learning and development in the Cognitively Oriented Curriculum." (High/Scope, 1977) (See Example A)

Activity Cards

Activity cards have been proposed for use in the classroom to provide the teacher with a management system without inhibiting the child choice required in the High/Scope Model. (See Example B) Assumption: Activity cards can be constructed based on one or more key experiences. (See Example C)

If the construction of activity cards is based on key experiences, it would be possible to monitor key experiences by monitoring activity cards.

Example D is a "child-carried" chart for an individual child. It is divided into Content Areas, with the numbers across the top corresponding with activity card numbers. Upon completion of the plan, work, represent, evaluate sequence, an activity card is considered completed. The child can fill in, check, or star the box, to designate completion. Compliance with completion instructions on the activity card is essential for quality control, i.e., to provide a "quick and dirty" way for completion to criteria.

Example E is a classroom chart which displays the total number of activity cards completed and child distribution plotted across weeks. In the example, 10 children completed one activity card in the first week. In the second week, five children completed two cards, and five had still completed one, and so on.....

It is possible to tell how well the class is progressing, how well a child is progressing, if the following are done.

1) Determine the appropriate number of key experiences to be presented during a year.

2) Observe the following metric.

$$\frac{\text{Number of Activity Cards Completed}}{(\%\text{ of way through the school year})\ (\text{number targeted/year})}$$

For example: If a child is 50% of the way through the school year, and there are 100 activity cards to be presented that year, and a child has completed 50 activity cards, the results are as follows:

$$\frac{50}{(.50)(100)} = \frac{50}{50} = 1.00$$

If the resultant number is 1.00, the child is directly on target. If the number is greater than 1.00, the child is ahead of schedule, and if the number is less than 1.00, the child is behind schedule.

Conditions on the use of the Metric

1) It may be necessary to "weight" the activity cards, because they probably will not be of equal duration.

2) Data will need to be collected to determine how to set yearly goals realistically.

3) Until the above two points are confronted, the metric must not be used as an accountability system.

4) It does not matter if activity cards are presented sequentially or not. The metric works the same.

Computer Assistance

The system is designed to include the aid of a computer. The key experiences provided by each activity card could be entered into the program. At the end of a designated period of time, e.g., weekly or bi-weekly, a teacher could simply enter the activity cards completed using some designated code. The computer would then tell her by child what key experiences have been accomplished. This method provides at least three advantages:

1) the record keeping for the teacher is kept at a minimum;

2) allows the possible option of a child entering the cards completed; and

3) could provide the instructional team with information for planning in a fairly rapid manner.

If computer time were used, the following reports could be generated.

Target information by:

1) By child
    a) yearly target
    b) by content area
    c) key experiences
2) By classroom
    a) yearly target
    b) by content area
    c) by key experiences

Example A

FOR THE ELEMENTARY GRADES

KEY EXPERIENCES
K - 5

The following key experiences have been found to support learning and development in the Cognitively Oriented Curriculum. They are general types of activities and processes which broaden and strengthen children's emerging abilities. It is a goal of the curriculum to provide these experiences for children within the framework of a developmental, generative approach to education.

Adults use the key experiences as guidelines for daily planning and teaching. They may be used to provide a focus for a small group activity, or they may be emphasized throughout the day as children initiate their own activities. The key experiences are described in detail in teacher's guides and illustrated in audio-visual training material.

Children benefit most from experiences that match their developmental capacities. Key experiences most appropriate for preoperational children are followed by P, for transitional children by T, and for concrete operational children by C. Those key experiences with no level indication can be of benefit to children at different stages of development, assuming the many variables of the particular situation are well matched to the individual.

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(313) 48502000

The key experiences are grouped within the three major areas of curriculum focus: the Modes of Learning, Relationship Areas and Content Areas.

MODES OF LEARNING
- Action
  - Planning
  - Working
  - Evaluating
  - Social Interactions
- Representation
- Language
  - Speaking and Listening
  - Writing
  - Reading

RELATIONSHIP AREAS
- Classification
- Seriation
- Number and Measurement
- Space
- Time
- Causality

CONTENT AREAS
- Art
- Play and Drama
- Construction
- Sewing
- Music
- Movement
- Media
- Social Studies
- Science

RELATIONSHIP AREAS

Classification

1. Describing many attributes of objects.
2. Finding and saying how objects are identical, similar and different.
3. Sorting objects and then resorting them using different criteria.
4. Dichotomizing objects. (T)
5. Identifying a set and one of its subsets; recognizing that the whole is greater than a part. (C)
6. Sorting items into groups and subgroups. (C)
7. Organizing information using lists, charts, graphs, etc. (C)
8. Making generalizations and drawing conclusions. (C)

Seriation

1. Comparing two or more objects using a single criteria; sorting objects into two groups based on a particular criteria.
2. Ordering items in a systematic way. (T) (C)
3. Inserting additional items in an ordered series. (T) (C)
4. Identifying two or more ordered differences between items. (C)
5. Seriating objects using two or more criteria simultaneously. (C)

Number and Measurement (Length, Area, Weight, Volume, Time)

1. Comparing objects or groups of objects.
2. Estimating a size or amount and then measuring or counting. Counting by 2's, 3's, 5's, etc. (T)
3. Choosing units of measurement. Using the unit by lining many up, or by repeating just one. (T) (C)
4. Adding, subtracting, multiplying or dividing with objects, groups of objects, or measurements of objects. (C)
5. Dividing units into sub-units. (C)
6. Inventing methods for solving math problems. (C)
7. Using standard methods and tools for measuring and calculating. (C)
8. Representing math information by talking, writing or using symbols, especially when reporting experiences.

Example B

Drama Activity 604

Sample Activity Cards

Grades

Title: Soundtracks

How do you suppose the sounds you hear on television, on the radio, or in movies are made? Who decides which sounds to use? Do they ever make mistakes?

You need a tape-recorder for this activity. First, find out how to use it and see what unusual sounds you can make. Then:

- Decide what to make a sound track for. It could be:

  a news broadcast

  a spooky story

  a visit to a mysterious island

  a dance

- Make up the sounds.
- Write down the order of sounds and how long they should last.
- Make the sound track.
- Play it for friends.
- What comes between the sounds.

PLAN

Name _____ Date _____

Activity:

Materials:

Steps:

What could your soundtrack be about?

What special sound effects do you want to include?

REPRESENTATION

Name _____ Date _____

Make a time line that shows each of your sound effects, when they occur, and how long they last.

REPRESENTATION

Name _____ Date _____

Write an advertisement about your sound track show (like what you might read in the T.V. Guide).

IF YOU FINISH EARLY .....

Make pictures to go with the soundtrack.

Think of ways to act it out.

Plan some more soundtracks so that you can have a whole show.

Activity 113 Grade

Title: Spooky Story

Close your eyes for a minute. Pretend you are home in bed.

What is happening in the basement in the middle of the night?

Can you hear it?

Write a spooky story about what you hear and what you think is down there. Add pictures to the story. Turn off the lights and read it to the class.

PLAN

Name _____ Date _____

What will you do? _____

_____

_____

_____

_____

How will you make it spooky? _____

_____

_____

_____

_____

List ten creepy things that might be there:

1. _____ 6. _____

2. _____ 7. _____

3. _____ 8. _____

4. _____ 9. _____

5. _____ 10. _____

Pick four words you will use in your story:

_____ creaking	_____ suddenly	_____ discover
_____ crash	_____ scared	_____ false
_____ quiet	_____ thought	_____ repeat

REPRESENTATION

Name _____ Date _____

Draw the creepy things on the left. Write the sounds they make on the right. See if your friends can match them.

_____

_____

_____

_____

_____

_____

Example C

An Activity Card Based on a Key Experience

Key Experience: Classification

Activity 200

Title: Alikes and Differences

Sometimes a group of things are very much alike, and at the same time, very much different. For example, playing cards can be grouped many different ways.

Take a deck of playing cards, and separate the red cards from the black cards. Find two other ways to group the cards. Make a poster how groups are alike and different.

Plan

Name_____ Date_____

What will you do?

How many ways can you group the cards?

List 4 ways cards can be alike.

List 4 ways cards can be different.

Representation

Name_____ Date_____

Draw the groups of cards on the left. Draw a card on the right that would fit in the group. Rearrange the right column, and see if your friends can match them, correctly, with the groups in the left column.

Example D

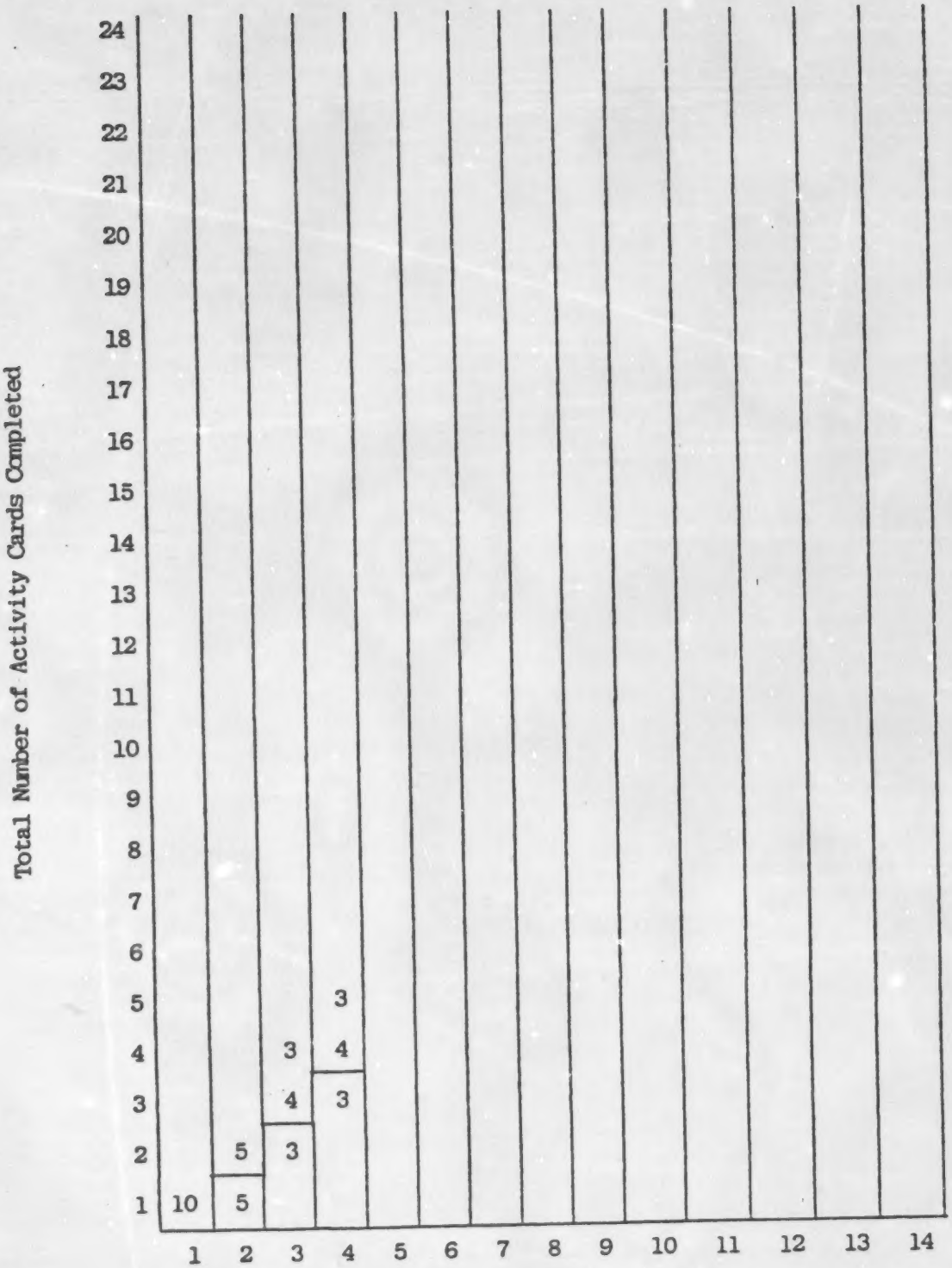
A Child's Data Sheet

to Record Activity Cards

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
Art																				
Play & Drama																				
Instruction																				
Sewing																				
Music																				
Movement																				
Media																				
Social Studies																				
Science																				
John																				

Example E

A Classroom Progress Chart



Part Three

THE PROCESS OF DESIGNING A JOINT MODEL

by Ann Branden

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THE PROCESS OF DESIGNING A JOINT MODEL

Why a High/Scope-Behavior Analysis Joint Model?

The Joint Model represents a concerted effort by the sponsors of two existing Follow Through models to combine distinctly different approaches to primary education. These approaches are an applied behavioral approach as practiced by Behavior Analysis Follow Through at The University of Kansas, and a Piagetian-cognitive approach as practiced by High/Scope Educational Research Foundation. At first the idea of combining these aproaches might seem impractical. The two models sometimes apprear incompatible in their orientations and methods. For example, High/Scope classrooms are characterized by allowing maximun student choice of activity within a regularized daily schedule. Behavior Analysis classrooms, on the other hand, are more structured and utilized carefully sequenced, basic skills curricula in which a day's activity (the material covered) is determined by the progress made in the previous day's work. The two sponsors have used their differences to advantage in forging an educational model. In this Joint Model the original models complement rather than compete with one another.

The Joint Model incorporates elements of the two models that not only complement one another but will lead to improved child performance. From Behavior Analysis comes the curricula and instructional methods relating to developing skills in the basic academic areas--reading, writing, and arithmetic; from High/Scope comes the plan, work, represent, evaluate sequence of the Cognitively Oriented Curriculum. This aspect of the cognitive curriculum is embodied in activity cards designed to develop generalized problem-solving abilities; these key experiences are intended to be applicable in real life situations. The Joint Model complements the High/Scope program by adding some instructional procedures and materials that have been proven effective in developing basic skills. It complements the Behavior Analysis program by adding a generalized problem-solving curriculum that is also designed to build a spirit of self-reliance in learning in the children.

The Process

The Joint Model Study Project was designed to study the feasibility of a collaboration of two existing educational models. The outcome of the study is twofold:

1. The formation of a new educational Model, which is described in detail in another section of this report.

2. The knowledge gained from careful attention to the process required to produce the new model. This knowledge is shared with the hope that it will prove to be an aide to others who may be planning similar collaborations in the future.

This section is presented in three parts: 1) a description of the procedures that were used to accomplish the formation of the model, 2) a series of recommended steps that would facilitate the process, and 3) a discussion of issues that remain to be resolved.

THE PROCESS: HOW IT ACTUALLY HAPPENED.

The first meeting of the Joint Model Study Project was at the Annual Sponsor Conference in Ypsilanti, Michigan in October of 1978. It was agreed that materials describing the theoretical bases, classroom procedures and training procedures of each model would be exchanged. This exchange took place in a timely manner to allow the participants from each model an oportunity to study the materials before the next meeting. Each model prepared a "working paper" outlining the goals and essential components of their model for use at the November meeting.

The next meeting was held at the High/Scope Foundation in November of 1978. The primary focus of this meeting was teaching each other about the essential components of the respective models. A second focus was to identify similarities between the models. The identification process included similarities between classroom practices, expectations of the children, teachers, trainers and other support personnel, etc., and training techniques. The Behavior Analysis staff also had an opportunity to observe in the High/Scope Training and Demonstration Classroom. It should be noted at this point that the necessity of explaining the essential components of a model to staff from another model produces the side benefit of promoting greater clarification and delineation of essential components.

In addition to the successful completion of the above foci, the initial work on the Spring, 1979 data collection was accomplished including the identification of the measures to be used and three of the four instruments to be included in the battery. A description of this phase of the project is contained elsewhere in this report.

The next step in the process was for the staff of each model to produce a "working paper," i.e., a proposal, containing a description of how they thought the Joint Model should be designed. These papers were exchanged and studied in preparation for the meeting held at The University of Kansas in February, 1979.

The meeting at Kansas was designed to generate goals and objectives for a Joint Model and to identify possible technologies to achieve the goals. The following steps were employed:

1. Statement of the problem(s). The group generated a statement of problems to be solved by the use of the Joint Model, specifically the problems of children in need of compensatory education.

2. Statement of the objectives. A statement of the objectives for a Joint Model, which is a corollary of the statement of the problem, was generated. The statement was fairly general in nature.

3. Identification of successful practices and techniques. Next the group identified a pool of successful practices and techniques from each model that might be employed by the Joint Model. (Preliminary work had been done on this step during the first meeting at which we identified similarities in practices and expectations.) The criterion for "successful" was support by data if possible.

4. Identification of practices and techniques to be applied. From the pool of techniques and practices identified in step 3, the group then identified the practices and technologies that could best be used to reach the stated objectives of the Joint Model.

5. Statement of goals. In the process of identifying practices and techniques to be used to reach stated objectives, a statement of more precise goals evolved. These goals, with some exceptions, were stated in such a manner that they could be readily measured so progress toward their attainment could be ascertained.

One product of the meeting in Kansas was a preliminary statement of the components of the Joint Model. Although this statement contained some specifics within the components, time constraints precluded the delineation of specific behaviors expected of the children, the teachers, and the trainers.

Time was allotted at this meeting for further planning of the Spring, 1979 data collection that was done in conjunction with the project. At this meeting, plans were finalized concerning the selection criteria for subjects and sites, and the analyses to be performed.

The group also discussed what measures might be used to assess the attainment of Joint Model goals in the event of an opportunity for implementation. It was decided that since the Joint Model was essentially a new model, it was important to measure the degree of implementation during the initial implementation phase. Several of the proposed measures for an implementation study of the Joint Model are found elsewhere in this paper.

The next phase of work was directly tied to the decisions made at the Kansas meeting. The primary task was to produce proposals concerning the measurement of progress in curriculum areas and measurement of implementation. These documents were exchanged and studied in preparation for the next meeting. The meeting was held at the High/Scope Foundation in July, 1979, after the preliminary analyses of the data, collected during the Spring of 1979, were completed. The primary topics of discussion at this meeting concerned the progress measures in the curriculum areas and further analyses of the data that might be done.

The discussion of progess measures at this meeting centered around a proposed progress measure for the activity card curriculum. (The proposal is another section of the report.) The important aspect of the discussion in relation to process is that the group, who had so consciously avoided any discussion of theoretical issues, was confronted with a substantive theoretical issue related to the progress measurement system. (see Recommendation #2 and #3 below). Although the specific issue was not totally resolved at the meeting, the theoretical discussion was appropriately delayed until confronted in conjunction with a specific technology to be employed. The alternatives would be: 1) to discuss theoretical issues in a context of more general methodologies which could result in a situation in which no resolution would

be effected: or 2) to entirely avoid theoretical issues which could result in an eventual erruption of such an issue during implementation, causing disruption of the implementation.

RECOMMENDATIONS: HOW IT SHOULD BE DONE.

Although a great deal of work was accomplished on the Joint Model Study Project, there were some tasks that were not completed to the satisfaction of all participants. This was due however, to circumstances beyond our control rather than to a lack of hard work. There simply was not enough time to resolve every important issue.

The following are recommendations to those contemplating model collaboration. Some unresolved issues are discussed following the recommendations.

1. Avoid initial discussions of the relative merits of differing theoretical orientations. During the initial meetings of the Joint Model Study Project, such discussions were avoided. This was initially helpful; however, we woon discovered that some important issues were left unresolved because of this. As indicated above, such discussions are, however, more pertinent when designing specific technologies to be employed, e.g., progress measures. This recommendation is most relevant to collaborations between classroom models with widely divergent theoretical bases. (See recommendation #7.)

2. Provide for more in-depth understanding of the models through participation in workshops and/or observation in classrooms. A staff member of the Behavior Analysis Model participated in a training workshop presented by the High/Scope Model for their field personnel. This opportunity resulted in a better understanding of the High/Scope Model, and subsequently facilitated preparation of "working papers" concerning the Joint Model and discussion at the meeting. The task could be approached from both points-of-view to facilitate a synthesis of materials and discussions. Funds should be allocated for a staff member from each model to participate in workshops given by the other and to observe in model classrooms.

3. Provide funds for meetings on a more frequent, regular basis. The process of the Joint Model Study Project would have been facilitated had there been funds for meetings on a more frequent, regular basis. Face-to-face discussion is important for resolving issues, especially those related to theoretical underpinnings of practice. For example, the issue of measuring child progress (other than reading and mathematics) was left unresolved because it was too difficult and sensitive to discuss by telephone or in writing. It is an issue that requires face-to-face discussion, and there simply was not enough money or time to resolve the issue to everyone's satisfaction. A three-day meeting on a bi-monthly schedule is suggested. This frequencey may not be necessary for all collaborations.

4. Order of tasks. A meeting to generate the goals and objectives and identify technologies to be used to meet the objectives should be held prior to writing the working papers designed to conceptualize a "joint" model. Remaining meetings could then be used for component specification, specification of expected behaviors of actors, and issue resolution. Review by the staff of each model as in recommendation #7 should occur on a regular basis after the working papers are exchanged.

5. Provide funds for materials development. Resolution of several problems depended on the development of curriculum materials for use in Joint Model classrooms. The development of materials would have progressed more smoothly and the issues could have been resolved if funds for developing these materials had been available.

   It should be noted in reference to recommendations #2, #3, and #5 that the lack of resources was a result of several factors. First, the availabe funds were limited. Second, the need for additional funds became apparent after the project was underway. Some of the steps that should have been included in the process were not apparent when the initial proposal was written. Hopefully, the recounting of the process and the recommendations given will help others to plan future collaborations.

6. Evaluation of a collaboration. In the event that this (or any other) collaboration should be invited to implement the "Joint Model," it is recommended that evaluation for the first year concentrate on implementation. We have learned from past evaluations that to measure outcomes before evaluating the degree of implementation can be misleading. It would also provide an opportunity to study, from an empirical standpoint, how the change process takes place. Measurement of progress toward full implementation could be used as formative data in the initial phases of the study. When there is evidence of implementation, outcome data such as child achievement measures could be used.

7. Review of model specification. Once the initial specifications of the model are established, they should be thoroughly and independently reviewed with particular emphasis on how the model works: how the specifications relate to the goals of the new model, if the goals are stated in a manner that affords assessment, and if the expectations of teachers and students are realistic (i.e., to review the merits of the new model in relation to the theoretical bases of the original models). This techique was employed by the Behavior Analysis Model, resulting in the discovery of several issues that remain to be resolved. These issues are represented in the following section as examples of the types of issues upon which our review process has focused, and more importantly, to serve as an outline for future work towards completion of the Joint Model.

ISSUES NEEDING FURTHER ATTENTION

Several issues need additional discussion and clarification before the Joint Model is implemented. These issues relate to teacher procedures, revising upward the basic skills achievement goals, time/progress contracting procedures, the activity card curriculum, the possibility of including a professional observer in each Joint Model classroom, the treatment and analysis of data obtained during implementation, and support system requirements. The purpose of presenting these issues is to identify areas that will need further development, and to suggest directions in which those developments might move.

Teacher procedures

The areas needing further specification include the use of extension questions, cognitive development guidelines, the use of monitoring data in the team planning session, activity planning guidance, the use of attention and praise, and teacher training.

Extension questions. Guidelines need to be developed to allow teachers to know how and when to ask extension questions most effectively. For example, extension questions should be thought-provoking but not confusing. This means custom-tailoring questions to specific children. Since the appropriate use of extension questions is a complex skill, perhaps teachers experienced in their use could run a workshop for the benefit of those not familiar with their use.

Cognitive development guidelines. The guidelines for assessing cognitive growth might be made explicit. This could be done by means of a cognitve development checklist. Further, the guidelines might relate specific behaviors to cognitive functions. If and when such guidelines are developed, teachers will require training in their use.

Use of data in team planning sessions. Weekly activity records, contracts, progress reports, and other materials (e.g., cognitive checklists) documenting each student's behavior and progress should be used in team planning sessions. Teachers will probably need training in how to interpret data from these sources to the best advantage.

Planning guidance. Teachers must be given guidelines for determining, or helping students to determine, students' progress targets. They must also be given clear methods and goals for negotiating the contracts to meet these specified targets. (The section on time/progress bargaining below elaborates on this point.) Further, there should be logical, functional connections between short-range goals and long-range goals.

Use of attention and praise. A strong case can be made for using teacher attention and praise to reinforce "progress" in addition to "on-task" behavior. Reinforcing on-task behavior is effective in helping children learn to attend to their studies, and to reduce (off-task) behavior that is incompatible with studying. However, for children that are not habitually "off-task", teacher attention and praise strictly for on-task behavior is unneccessary and may even be counter-productive to the goals of the Joint Model. Once a child is "on-task", teacher

attention and praise should be given for progress. If the emphasis of teacher attention and praise is not shifted to progress, it is possible that unproductive on-task behavior will be reinforced. If we wish to promote productive on-task behavior, or progress, we whould do so directly. One way to do this is to give teacher attention and praise contingent upon progress through the curriculum.

Teacher training. Teacher training is important to the integrity of the Joint Model. Concrete arrangements for teacher training workshops, manuals, and other channels of cummunication should be made. In order to implement training, expected behaviors must be made explicit.

Upward revision of basic skills achievement goals.

It has been strongly argued by individuals at Behavior Analysis Follow Through that the goal of having "no child more than one year behind" (average for that grade) is inappropriate. This goal is also incompatible with the previously stated goal of "at least a year's progress for a year's time." The goal should be revised to have all children at or above grade level.

Time/progress bargaining

Recall that in the progress management system outlined in the implementation paper students are allowed to schedule or contract their own progress in each subject. A student making insufficient progress in a subject would be required to contract progress in that subject before contracting progress in other subjects.

Individuals at Behavior Analysis Follow Through have identified several potential problems with this time/progress bargaining procedure. The following conditions combine to cause serious reservations concerning the time/progress bargaining system.

1. The system may be incompatible with a stated principle of the Joint Model, namely that there will be minimal use of extrinsic reinforcement. The system constitutes a use of extrinsic reinforcement which may or may not be considered as "minimal".

2. A more serious potential problem is the possibility that required contracts may become punishing.

In order to minimize any punishing effects, and secondarily, to be consistent with the principles of the Joint Model, the sponsors of the Joint Joint are faced with the problem of either altering the current time/progress bargaining arrangement, or developing a new progress management system.

Is there an acceptable method of progress management other than time/progress contracting? The question was asked at Behavior Analysis Follow Through, but no one came up with a viable alternative. All agreed that the contracting procedure is preferable to assigning work. It is still possible that alternatives do exist, but until they are recognized it would be best to proceed under the assumption that the Joint Model will use some type of contracting procedure.

The next question is how can the contracting procedure be adapted to minimize punishing effects on study behavior. One variation of the procedure would be to contract time and not progress within an area of the curriculum. A child's confidence in his own planning ability might suffer if a contract for progress is not completed within the time agreed upon. For this reason it may be preferable to contract for time. This slight change in the contracting procedure may help to reduce aversive aspects of the contracting procedure.

According to empirical work by Premack (1965), a more probable (preferred) behavior can increase the probability of a preceding less preferred behavior. It is possible to use this formula to keep the contracting procedure from being aversive. By taking initial observations of the probabilities of engaging in each area of the curriculum, a child's set of probabilities for participating in those areas may be computed. Then by sequencing contracted activities during the day, starting with least preferred and progressing to most preferred, the less preferred activities should be facilitated. In this way less preferred activities may become progressively more preferred. This situation might attenuate some of the punishing properties of the bargaining system.

The activity card curriculum

This part of the Joint Model curriculum is being developed by High/Scope. Hopefully, the curriculum will provide answers to the following questions.

1. What cognitive skills should students have at the end of Kindergarten, 1st, 2nd, and 3rd grades?

2. What are the component skills, developed by completing activity cards, prerequisite to achieving the above goals.

3. Will these component skills, and the activity cards be logically sequenced?

Professional observers

It has been suggested that the paperwork involved in monitoring classroom activities and progress may jeopardize the project by overloading the teaching staff. An interesting and potentially useful suggestion to solve this problem is to attach a part of full-time professional observer to each classroom. This observer could help with keeping records and also take "almost anthropological records of the process and incidents" in the classroom. This idea is particularly attractive since objective data on how the class functions is usually obtained by staff trainers or district advisors only once or twice a month. The cost of such an addition to the classroom has not been estimated.

Treatment and analysis of implementation data

An important project to be undertaken is the development of specific research questions. The particulars of data collection, treatment, and

analysis will also need specification before the Joint Model is implemented.

Parent involvement

The issue of parent involvement has as yet received little attention. Means of parent involvement, both within and outside the classroom, need development. Parent involvement measures developed at Behavior Analysis Follow Through may be easily adapted to assessing the degree of parent involvement in the Joint Model.

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PART FOUR

RESULTS OF SPRING 1979 DATA COLLECTION AT CHICAGO AND WAUKEGAN FOLLOW THROUGH SITES

John R. Berrueta-Clement, Ph.D.
Bernard Banet
Ann Branden

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I

SUMMARY

Data were collected in spring 1979 on student outcome and satisfaction variables for third-graders at Chicago (High/Scope) and Waukegan, Illinois (University of Kansas) Follow Through sites. The purpose of data collection was to determine whether the two models resulted in different outcome variable profiles, with the expectation that this information would be useful in future efforts to further specify the Joint Model curriculum.

Overall, major findings can be summarized by saying that there are differences in profiles of the outcome variables measured. These relative profile comparisons use, as reference points for each sponsor, the other model's outcome scores. Children in the High/Scope curriculum performed relatively higher on measures of productive language competence (the Story Writing Task of the Productive Language Assessment Tasks), when compared to their performance on measures of word decoding, spelling and math (Wide Range Achievement Test) and on a measure of reading comprehension (the Reading Comprehension subscale of the Metropolitan Achievement Test, Metro '78 version). Children in the Behavior Analysis curriculum performed relatively higher on these WRAT and MAT variables, compared to their performance on the PLAT.

Although a direct contrast of outcome variable levels for the two sites and sponsors was not an objective of the data collection efforts, the raw outcome variable levels are of interest and are presented in Appendix 1. The design used for this research does not permit separation of components of variation in child outcomes attributable to curriculum model from components attributable to other site and school-level effects.

Data were also collected on student satisfaction with school and school-related topics; analyses showed better than two-thirds of the students at both sites responding that they liked school "a lot" and were happy there. No statistically significant differences in response levels between sites occurred. The high frequency of positive responses at both sites suggests that the Joint Model might also be expected to achieve high levels of consumer satisfaction.

A number of other analyses of the data collected were conducted. In particular, exploratory analyses examined within-site differences in patterns of performance on some of the outcome measures. The results point to the possibility of subject-by-model interactive effects, and suggest areas for additional investigation during the implementation of the Joint Model.

In future Joint Model curriculum development and implementation efforts, out work will benefit from findings that support the notion that curricular emphases can affect outcome variable profiles.

II

PURPOSE OF JOINT MODEL DATA COLLECTION AND ANALYSIS

The overall purpose of both data collection and analysis was to determine whether the two models produced different outcome profiles in third graders at the end of their last school year in the Follow Through program.

Data were collected in Spring 1979 on student outcome and satisfaction measures at sites for both the High/Scope and University of Kansas Follow Through sponsor models. Sites for data collection were selected from among the best-implemented exemplars of the sponsor models, using as criteria demographic similarity and (for logistical purposes) physical proximity. The Chicago site was selected to represent the High/Scope Foundation's Cognitively Oriented Curriculum; Waukegan, Illinois represented the University of Kansas' Behavior Analysis Model.

Four areas for outcome measurement in the Joint Model project were selected. Traditional academic achievement was assessed by the Wide Range Achievement Test (Jastak and Jastak, 1971). Expressive and representational skills were measured by means of the Productive Language Assessment Tasks' Story Writing Task (PLAT-SWT) (Bond et al., 1976; Kittel et al., 1978). Reading comprehension was measured through the use of the Reading Comprehension subscale of the Metropolitan Achievement Tests, Metro '78 version (The Psychological Corporation, 1978). A fourth and final area of outcome assessment was that of student satisfaction with school and school subjects, for which information was collected through the administration for a brief questionnaire.

III

DATA COLLECTION AND ANALYSIS

Instruments and Variables in the Spring 1979 Data Collection

The instruments used in Spring 1979 outcome assessments at the Chicago (High/Scope Cognitively Oriented Curriculum model) and Waukegan (University of Kansas Behavior Analysis model) sites were the following:

- The Wide Range Achievement Test (WRAT)(Jastak and Jastak, 1965);
- The Metropolitan Achievement Test, Metro '78 version, Primary 2 level, Reading Comprehension subscale (MAT)(The Psychological Corporation, 1978);
- The Story Writing Task of the Productive Language Assessment Tasks (PLAT-SWT)(Bond et al., 1976; Kittel et al., 1978); and
- Four questions asked of the students about their satisfaction with school and with school-related subjects.

The major variables used in outcome analyses were the following:

WRAT:

- Reading subtest raw score (number correct);
- Spelling subtest raw score (number correct);
- Math subtest raw score (number correct);

MAT:

- Reading Comprehension subscale raw score (number correct);

PLAT-SWT:

- Fluency (total number of words in the text);
- Adherence to Conventions (scaled ratings for spelling, punctuation and usage);
- Cohesion (scaled ratings of sentence structure);
- Dramatic Structure (scaled ratings of overall story construction);

- Narrative Elaboration (scaled ratings for the presence of stylistic story elements such as surprise or humor);
- Title/Story Relationship (scaled rating for the presence or absence of any meaningful link between the story theme and its title); and
- Holistic Entertainment Value (scaled rating for the extent to which the rater enjoyed reading the story).

For complete definitions of the PLAT-SWT summary variables and of the scoring procedures used to create them, see Kittel et al., 1978.

The four questions asked of the students concerning their satisfaction with school were:

- How much do you like reading?
- How much do you like math?
- How much do you like school?
- How happy does it make you feel?

Allowable response categories for these questions were: "a lot," "some," and "not at all."

Descriptions of the Samples

The Waukegan site included only one school, Carman Elementary. There are three Follow Through third grade classes at Carman. Rosters returned for the classes listed a total of 78 available children, of whom 34 were excluded for Spring 1979 testing. Children were excluded for the following reasons: not meeting Follow Through economic guidelines (13); having repeated a grade (9); and not having had at least three continuous years in the program (14). These figures add up to more than the total number of third graders excluded because some children were excluded for more than one reason. Forty-four third graders were considered eligible for testing for the Waukegan site.

The Chicago site includes two schools: Howland and Lathrop, located geographically within a few blocks of one another. Both schools use an ungraded classroom system, in which children at the first, second and third grade levels are attended together. There were six Follow Through classrooms at Howland and the same number at Lathrop. Rosters returned from these 12 classrooms listed a total of 42 third graders. All children in the rosters were stipulated to meet Follow Through program guidelines. Children repeating grades and those with less than three continuous years in the

program were eliminated from the rosters before these were returned from the site, in spite of requests that this not be done. For this reason, there is no formal assessment available of the size or composition of the sample population from which the Chicago site children tested were drawn; no children were excluded from the roster list received.

In total, 86 children from both sites were selected for testing and interviewing.

Testing Procedures

The various outcome measures were administered by staff from both sponsors. Overall testing coordination was provided by a research assistant from the High/Scope Foundation, who also administered both the PLAT-SWT and the MAT Reading Comprehension instrument at both sites. The WRAT was administered at both sites by trained staff from the Waukegan model with extensive prior experience with the instrument. The High/Scope research assistant was specially trained at Foundation headquarters in Ypsilanti on administration procedures for the MAT and PLAT; her training included supervised testing of children at the third grade level in Ypsilanti.

The WRAT tests include group and individually administered sections: the spelling subtest is group-administered, while the math and reading subtests are individually administered. Immediately after individual WRAT tests were concluded, the children were asked the four consumer satisfaction questions. The MAT Reading Comprehension subscale was administered individually, while the PLAT-SWT instrument was administered to small groups of six or fewer children. Although WRAT test administration occurred at different times from the administration of MAT and S.T instruments, the span of time involved was less than eight days. In all cases, children were removed from their regular classes for testing, and taken to different rooms.

Despite the occurrence of some natural scheduling conflicts, testing proceeded in general in an orderly manner. The cooperation of teaching and administrative staff at both sites was entirely satisfactory.

Testing took place during the following periods in May 1979:

	Waukegan	Chicago
MAT/PLAT-SWT:	May 7-11	May 14-18
WRAT:	May 14-15	May 22

Methods of Data Summarization and Analysis

In order to compare outcome variable profiles for the two sites, scores for each child on all variables (except the answers to the interview questions on student satisfaction) were transformed to a common metric with mean of zero and standard deviation of 1 for the entire Joint Model Spring 1979 sample, for each variable. Given the absence of national-norm reference data for the PLAT-SWT, or of independent information specifying the relationship between PLAT and WRAT levels for other comparable samples of children, this is the only procedure that could be utilized to establish a comparable metric for each WRAT and PLAT variable. The advantage of this procedure is that it permits exploration of profile similarities without reference to absolute variable levels; its main disadvantage is its total lack of generalizability to other student populations. Another consequence of this procedure, given samples of approximately the same size for each site, is that the outcome variable profiles will be approximate mirror images of each other, reflected across the zero line; this is an inevitable artifact of the procedure used to generate the profiles and of the fact that there are only two groups of approximately the same sample size involved.

Analytic methods used with this and other study data included the computation of descriptive statistics for each site sample, and the comparison of site samples using tests for differences in both central tendency and dispersion. Central tendency tests used were both parametric (t,F tests) and non-parametric (x^2, Mann-Whitney U, median test); dispersion tests were parametric (F-test). Z transformations were used in order to test differences between Pearson correlation coefficients. Other, more exploratory analyses used a combination of discriminant function and hierarchical clustering procedures. Throughout analyses, α = .01 levels were employed to test for statistical significance.

IV

PRINCIPAL STUDY FINDINGS: THE COMPARABILITY OF SITE OUTCOME VARIABLE PROFILES

Figure 1 presents the relative outcome variable mean level profiles for the samples of students at both the Waukegan and Chicago sites. Inspection of the figure permits us to reach a number of conclusions with respect to the major study hypotheses:

1) There are outcome variable profile differences between the two sites. If the profiles of outcome variables were the same for both sites, the bar charts would be parallel in height all across the chart; although there is rough parallelism in bar heights in traditional academic areas such as reading and reading comprehension, spelling and math (MAT and WRAT tests), this is not the case in the area of productive language assessment (PLAT-SWT).

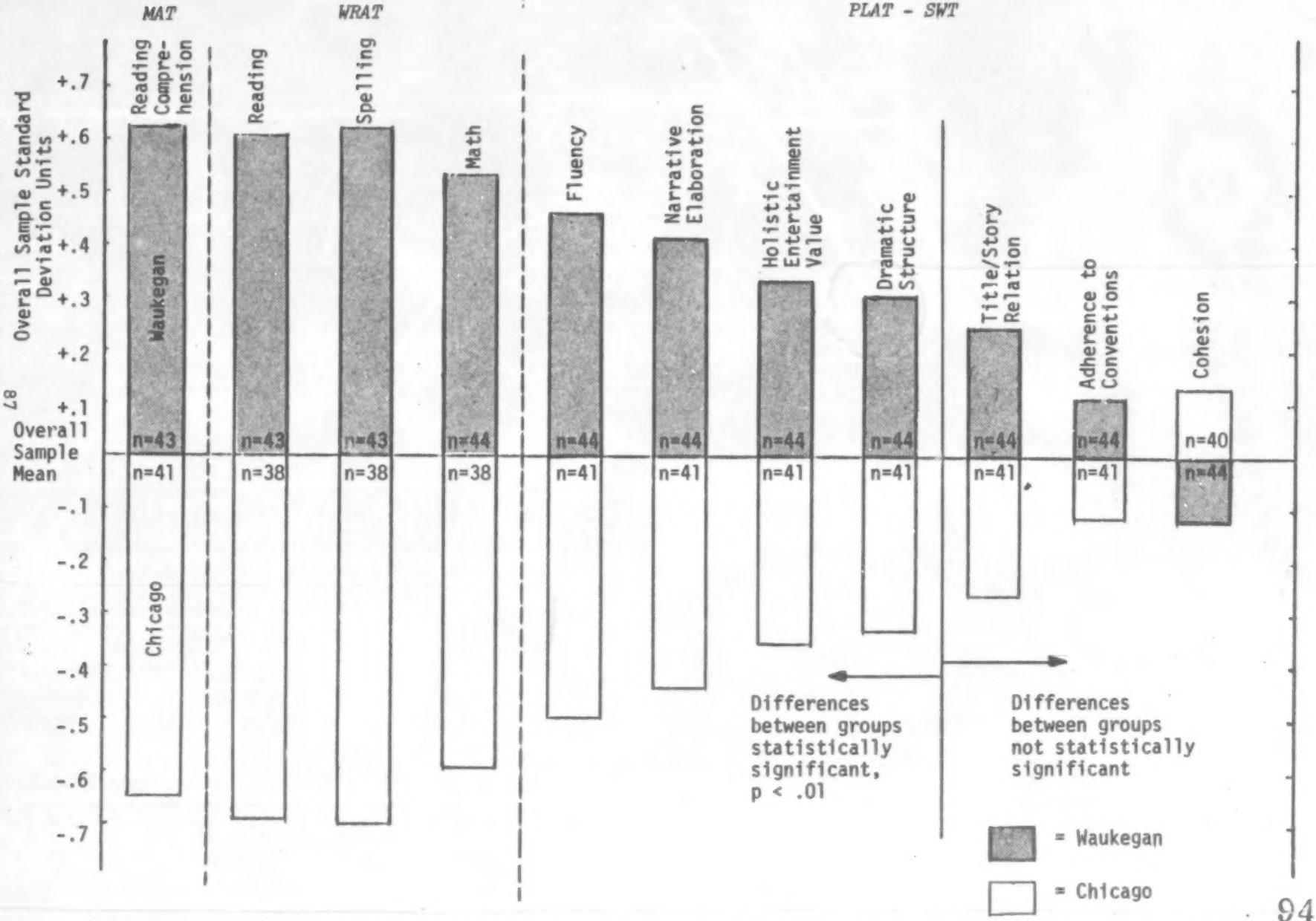
2) Differences between the two sites are smaller (using a common metric across all the outcome variables based on site mean levels as dispersions about an overall sample mean) for the PLAT measures than for the WRAT and MAT measures.

3) Of the eleven variables presented in the figure, eight show differences between the two sites of sufficient magnitude to reach statistical significance at the .01 level or better. Significant differences occur in a common direction, with Waukegan third-graders showing higher scores than Chicago third-graders. Differences between site means for these eight variables range from three-fourths of a standard deviation to one-and-one-half standard deviations.

The raw score data on which the outcome profiles of Figure 1 are based is presented as a series of tables in Appendix 1.

Figure 1

Profiles of Chicago (H/S FT) and Waukegan (BAFT) Site Mean Outcome Variable Levels for Third Graders in Spring 1979 Joint Model Testing



Note: bar heights for each variable correspond to site sample means expressed as s.d. units from overall sample mean.

Although interpretation of the findings is simple, the ascription of causal statements to them is less straightforward. The design used in the study does not premit the separation of variance components in the child outcome variables into portions attributable to curriculum model and portions attributable to other site and school-level effects. This might have been possible with a modified design, for instance, in which children from non-Follow Through schools at each of the sites were also tested; funds were not available for implementation of such design variants.

It is simply not possible to ensure, given the research design and the kinds of data resources permitted us to collect, that the samples of students exiting the third grade in the spring of 1979 from two schools in inner-city Chicago will be just like those graduating from Waukegan that year, in terms of background and prior experiences, except for the curricular approach under which they studied. Some possible sources of variation, whose extent and impact simply cannot be evaluated, are: socioeconomic and other demographic characteristics of the study samples; characteristics of the two school systems; and levels and styles of implementation of the two sponsor models at each site.

The finding most useful to later curriculum implementation efforts is, however, that of differences in relative outcome variable profiles. The possibility that this difference can be related to curricular emphases is supported by the fact that there is some correspondence between major curricular notions and the relative outcome profiles; and this would seem to suggest that program elements can be merged in the Joint Model so as to maximize the impact of both sponsor models.

V

OTHER STUDY FINDINGS: STUDENT SATISFACTION, WITHIN-SITE VARIABILITY, AND OTHER BETWEEN-SITE ANALYSES

A number of other analytic approaches to the outcome data collected for this study were attempted, in addition to the inspection of overall outcome profiles presented in the previous section. The present section of the report summarizes the findings for student satisfaction data and reports briefly on other analyses of between and within-site variability conducted on the outcome measures.

Comparison of Student Satisfaction Levels

The four questions on satisfaction with school topics, and on happiness and satisfaction with school, were asked of all students immediately after taking the WRAT. Table 1 summarizes the percentage of students at each site responding in each category. Differences between sites were tested by χ^2 using the raw frequencies; none of the response frequencies were significantly different. Differences in response levels were also tested for aggregate data in all possible ways (aggregating, for instance, 'a lot' and 'some' response frequencies and contrasting 'some or better' and 'not at all' response frequencies for both sites), and no differences between sites were significant when tested in this fashion. Tests for trend similarity in response frequencies across the four questions were conducted by summing together the χ^2 values for each question and adding their degrees of freedom; no significant differences between site frequency levels were found. Findings were that data were not significantly different by site, and were confirmed using Kolmogorov-Smirnov nonparametric ordinal tests (Blalock, 1960, pp. 203-205), which failed to show differences between sites on any of the four student satisfaction questions (all values showed $p > .30$).

Better than two-thirds of students at both sites responded that they liked school 'a lot' and were happy with it (percentage range: 70-80%). The percentages of students responding that they did not like the topics or school with a 'not at all' ranged from 0 to 11%. In summary, students at both sites in general stated that they liked reading, math and school, and that they were happy with school. The possibility of such favorable response levels being in part due to the fact of their being asked these questions in a school setting cannot be ignored. In any case, however, there is no sign that students differed between sites in their response styles to these four questions.

Table 1

Student Consumer Satisfaction
(Percentage of respondents by response category)

	N	A Lot	Some	Not at All
1. *How much do you like reading?*				
Waukegan	44	80%	14%	7%
Chicago	38	82%	11%	8%
2. *How much do you like math?*				
Waukegan	44	70%	18%	11%
Chicago	38	76%	21%	2%
3. *How much do you like school?*				
Waukegan	44	77%	18%	4%
Chicago	37	89%	11%	0%
4. *How happy does it make you feel?*				
Waukegan	44	68%	27%	4%
Chicago	37	78%	16%	5%

NOTE: Some percentages do not total to 100%, due to rounding errors.

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Summary of Other Findings

A number of analyses were conducted in addition to the comparison of overall outcome profiles; they serve to provide additional information about the performance of third graders in the two samples. These analyses included: analyses of within-site variability; inspection of site-level variable intercorrelation patterns; and comparison of between-site differences in levels of dispersion.

Analyses of within-site variability for the PLAT-SWT data suggest that there might be distinctive groupings of children within each site, sharing common response patterns for the productive language outcome variables. A variety of exploratory analytic techniques were employed; since they are complex and their results are at this point only exploratory, the findings were not included in the present report; they are available from the senior author on request. Confirmation of such patterning could enrich each model's understanding of its own processes and their impact on participating children, as well as providing grounds for assessment of the impact of Joint Model activities.

Other analyses conducted failed to show differences between site samples on variable intercorrelation levels or on levels of within-site variation in outcome variable dispersion levels.

VI

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APPENDIX 1

SUMMARY OF RAW OUTCOME VARIABLE SCORES FOR BOTH SITES

Although it was not the purpose of the present research endeavor to compare overall outcome levels for Waukegan (BAFT) and Chicago (H/SFT) third graders tested in Spring 1979, the data used in performing the above analysis are here made available in terms of descriptive statistics. Data presented in what follows summarize the PLAT-SWT variables, the WRAT subtest raw score totals, and the MAT Reading Comprehension raw and transformed scores.

PLAT SUMMARY VARIABLES

Table 1 provides descriptive statistics for the seven PLAT/SWT summary variables, giving both values for the overall sample and for each of the two sponsor sites. Values for tests of differences between mean levels are also presented. There are significant differences between sponsor sites for five of the seven SWT variables; all of them favor the Behavior Analysis site. Grade three children tested at Waukegan wrote longer stories than did children at the two Chicago schools (variable FLUENCY: Waukegan, mean 128, s.d. 59; Chicago, mean 72, s.d. 40; $t=5.00$, $p<.001$). The stories of Waukegan children were coded as having higher levels of dramatic structuring than were those of Chicago children (Waukegan, mean 31.1, s.d. 16.8; Chicago, mean 20.3, s.d. 15.8; $t=4.52$, $p<.001$); they also showed higher levels for the summary variable Narrative Elaboration (Waukegan mean 19.7, s.d. 8.1; Chicago mean 12.3, s.d. 7.5; $t=4.52$, $p<.001$), and a higher rating was assigned by the coder to the holistic entertainment value of the Waukegan than the Chicago stories on the average (Waukegan mean 4.5, s.d. 1.6; Chicago mean 3.2, s.d. 1.7; $t=3.32$, $p<.01$). For the Title/Story Relation variable, all of the Waukegan children scored positive, while 36 of 41 Chicago children scored positive; the difference in levels is significant (by χ^2 test, $\chi^2=5.76$, 1 d.f.; $p<.02$). Although differences in standard deviation levels between groups on some of the variables, and the fact that variable interrelations mean that the tests are not mutually independent, may diminish the actual significance levels of the data, the trend of SWT summary variables is unquestionable. Two variables, Adherence to Conventions and Cohesion, showed no statistically significant differences between sponsor groups.

Descriptive Statistics for PLAT-SWT Summary Variables

1. FLUENCY (range-open)

	n	$\bar{x}$	s.d.	Range	Median	Avg. Rank
BA	44	128	59	38-300	111	56
H/S	41	72	40	23-204	62	29
ALL	85	101	58	23-300	86	--

t = 5.00, 83 d.f.; $p < .001$
u = 332.50; $p < .001$
Median test, $p < .001$

2. ADHERENCE TO CONVENTIONS (range: 5-45)

	n	$\bar{x}$	s.d.	Range	Median	% at Ceiling	Avg. Rank
BA	44	32.2	7.0	8-45	33	2.3	46
H/S	41	30.6	7.2	17-45	30	2.4	40
ALL	85	31.4	7.1	8-45	31	2.4	--

t = .67, 83 d.f.; $p > .20$
u = 777.5; p = .27
Median test, p = .30

3. COHESION (range: 9-81)

	n	$\bar{x}$	s.d.	Range	Median	% at Ceiling	Avg. Rank
BA	44	55.5	13.3	25-81	55	2.3	39
H/S	40	58.9	13.2	23-81	63	2.5	46
TOTAL	84	57.1	13.3	23-81	61	2.4	--

t = -1.16, 82 d.f., $p > .20$
u = 733; p = .186
Median test, p = .189

Table 1 (continued)

4. DRAMATIC STRUCTURE (range: 6-54)

	n	$\bar{x}$	s.d.	Range	Median	% at Floor	% at Ceiling	Avg. Rank
BA	44	31.1	18.8	6-54	39	13.6	9.1	50
H/S	41	20.3	15.8	6-54	10	29.3	2.4	35
TOTAL	85	25.9	17.1	6-54	22	21.2	5.9	--

$t = 4.52$, 83 d.f., $p < .001$
$u = 578.5$, $p = .004$
Median test, $p = .003$

5. NARRATIVE ELABORATION (range: 5-45)

	n	$\bar{x}$	s.d.	Range	Median	% at Floor	Avg. Rank
BA	44	19.7	8.1	5-37	19.5	2.3	54
H/S	41	12.3	7.5	5-34	10	22.0	32
TOTAL	85	16.1	8.7	5-37	15	11.8	--

$t = 4.38$, 83 d.f., $p < .001$
$u = 438.5$, $p < .001$
Median test, $p < .001$

TABLE 1 (Continued)

6. TITLE/STORY RELATIONSHIP (range: 1,9)

	n	"1" no rel.	"9" rel.		
BA	44	0	44	9.0	
H/S	41	5	36	8.02	
TOTAL....	85	5	80	8.52	1.88

*

U= 792, p= .0176
Median test, p= .0228
X^2= 6.70, 1 d.f.; p=.017

7. HOLISTIC ENTERTAINMENT VALUE (range: 1-7)

	n	$\bar{x}$	s.d.	Range	% at Floor	% at Ceiling	Median	Avg. Rank
BA	44	4.5	1.6	1-7	9.1	11.4	5	51
H/S	41	3.2	1.7	1-7	26.8	4.9	3	34
TOTAL...	85	3.9	1.8	1-7	17.1	8.2	5	-

t= 3.32, 83 d.f., p<.01
U= 553, p=.001
Median test, p<.001

WRAT SUMMARY VARIABLES

Table 2 provides descriptive statistics for the three WRAT subtest raw score totals. Between-site differences are consistent for all three subtests: Waukegan children score higher than Chicago third graders. On the average, Waukegan third graders responded correctly to 63 items in the Reading sub-test, while Chicago third graders responded correctly to 48 items. For the Spelling subtest, Waukegan children showed a mean of 40 correct responses while Chicago children had a mean of 32 correct responses. The Math subtest gave average values of 30 correct responses for Waukegan, and 27 correct responses for Chicago. In all cases, the difference between means corresponds to between 1.5 and 2 standard deviation units. Differences between means are significant at $p < .001$ for all three subtests. Comparison of mean and median values for each subtest display no indications of skewness in the variable distributions. Standard deviation levels for all three subtest variables are comparable for both sites, with no suggestion of differences in within-site dispersion levels.

TABLE 2 DESCRIPTIVE STATISTICS FOR WIDE RANGE ACHIEVEMENT TEST

(RAW SCORES BY SUBTEST)

	N	MINIMUM	MAXIMUM	MEAN	STD DEV	MEDIAN	T
1. READING SUBTEST (RANGE 0-100)							
WAUKEGAN	43	42	85	63.163	8.9998	62	7.66*
CHICAGO	38	33	80	47.684	9.1389	46	
2. SPELLING SUBTEST (RANGE 0-65)							
WAUKEGAN	43	28	53	40.318	5.1298	41	7.89*
CHICAGO	38	16	43	31.842	4.6004	32	
3. MATH SUBTEST (RANGE 0-59)							
WAUKEGAN	44	26	36	30.250	2.0812	30	6.27*
CHICAGO	38	21	32	27.026	2.5093	27	

*$p < .001$

A-7

MAT SUMMARY VARIABLES

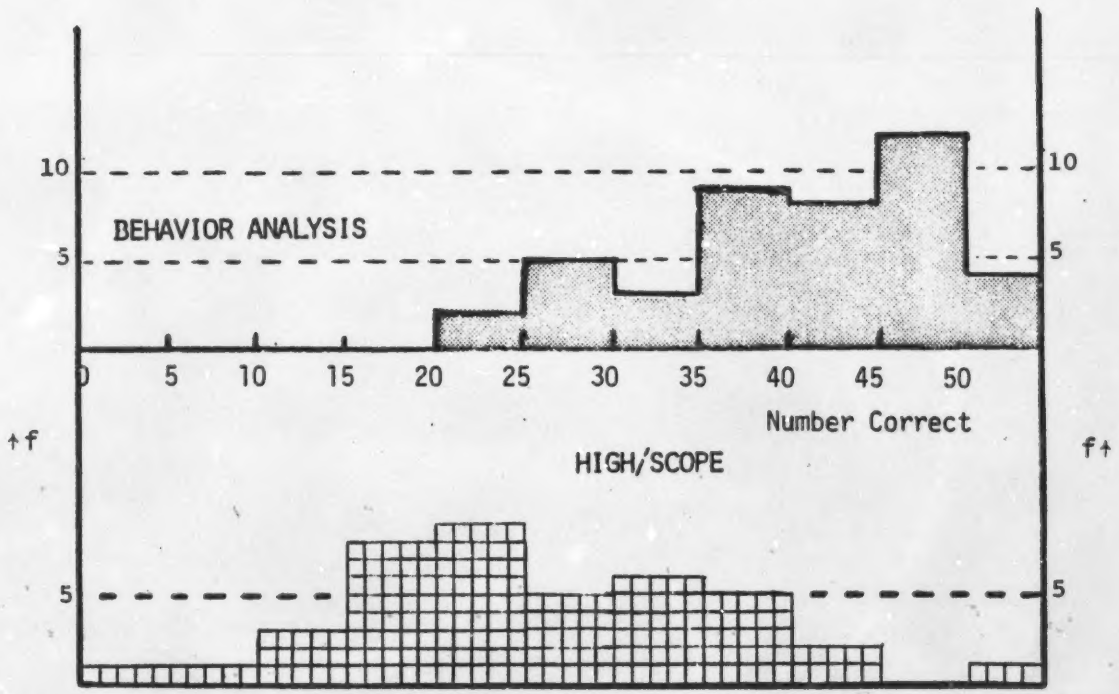
The four MAT variables coded are perfectly interrelated, since the last three (the scaled score, the grade equivalent and the Instructional Reading Level) are just rescaled versions of the number of items correctly responded to. Table 3 compares the two sponsor sites for these variables. As with the PLAT SWT data, the difference in number of items correct (and in other variables) strongly favors the Waukegan site. On the average, Waukegan third graders emerging from the Behavior Analysis curriculum responded correctly to 40.6 items, while the Chicago (High/Scope) third graders responded correctly to 25.9 items. The difference is not only significant statistically ($t=7.43$, $p<.001$), but is clearly educationally meaningful--over one and one-half standard deviations, corresponding to nearly 1.5 years in both grade equivalents and the MAT Metro '78 Instructional Reading Level assessment. Figure 1 presents the distribution of the number of correct responses for both groups.

TABLE 3. DESCRIPTIVE STATISTICS FOR FOUR MAT READING COMPREHENSION SUBSCALE VARIABLES.

	N	Minimum	Maximum	Mean	S.D.	Median	t
1. Number of Items Correct (range: 0-54)							
Waukegan	43	21	54	40.58	8.33	41	7.43*
Chicago	41	5	51	25.85	9.59	25	
2. Scaled Score							
Waukegan	43	561	774	658.95	48.15		
Chicago	41	440	711	477.41	47.48		
3. Grade Equivalent							
Waukegan	43	2.1	8.9	3.60	1.57		
Chicago	41	1.3	5.5	2.33	0.64		
4. Instructional Reading Level							
Waukegan	43	1	5	2.93	0.94		
Chicago	41	0	4	1.51	0.78		

* $p<.01$

FIGURE 1. METROPOLITAN (METRO 78) READING COMPREHENSION SUBTEST RAW SCORES



	n	$\bar{x}$	s.d.	Median
BA	43	40.6	8.3	41
H/S	41	25.9	9.6	25
TOTAL	84	33.3	9.0	33.5

Part Five

HIGH/SCOPE -UNIVERSITY OF KANSAS JOINT MODEL PROJECT: IMPLEMENTATION PHASE

HIGH/SCOPE - UNIVERSITY OF KANSAS JOINT MODEL
PROJECT: IMPLEMENTATION PHASE

Introduction

The High/Scope - Kansas Joint Model project was first conceived in 1977 in response to an OE challenge for Follow Through sponsors to show they could "work together." The challenge was pursued by Dave Weikart and Don Bushell during an ensuing conversation. A plan for joint model development was formalized in a proposal option submitted to OE early in 1978. Later that year, the option was revised and became a proposal which was funded for a year's work beginning in October, 1978.

During this first contract (feasibility) year, progress toward the formulation of a Joint Model combining elements of the High/Scope Cognitively Oriented Curriculum and the University of Kansas Behavior Analysis Curriculum has been substantial.* So far, the High/Scope and Kansas teams have identified the educational problems to be addressed by the Joint Model, have drafted program objectives to address these problems, and have identified program components to achieve the objectives. These are documented in the working papers and reports of the project. In addition, possible instruments have been identified for a program evaluation battery at the third-grade level. A preliminary data collection using these instruments was undertaken at existing High/Scope and Kansas Follow Through sites.

Progress to date on the Joint Model has resulted in an educational model synthesizing successful elements (both High/Scope and the University of Kansas have J.D.R.P.-validated field sites) of the two operational models. From the Behavior Analysis program has come a system for managing children's progress through sequenced materials. In the Joint Model this management system would be related to all curriculum content. From the Cognitively Oriented Curriculum comes the cycle of Planning/Working/Representation/Evaluation for learning center activities in art, construction, etc. and writing. A truly collaborative product has been a unique operational routine for the Joint Model which allows maximum choice and responsibility for the child while retaining management of well-defined learning targets. In this system, children move freely (following self-generated, but negotiated schedules) among various learning centers in reading, mathematics, art, construction, sewing, cooking, and music (or other) centers. Children negotiate schedules based on learning targets prescribed by the management system. Only when children are failing to meet these targets within their self-generated schedules is their freedom of choice restricted.

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* See High/Scope Educational Research Foundation, Joint Model Study Project Progress Report #5, February 19, 1979, DHEW Contract # 300780486

Goals of the First Implementation Year, 1979-80

During 1979-80 the project would:

1. Specify the curriculum objectives and materials of the Joint Model (grades K-3).

2. Develop a management system for monitoring student progress, defining and adjusting expectations about student work, as well as summarizing student achievement.

3. Implement a prototype version of the Joint Model in one Kindergarten classroom in Waukegan, Illinois now using the Behavior Analysis Model, and two Kindergarten classrooms in Chicago, now using the High/Scope Cognitively Oriented Curriculum.

4. Monitor the implementation process in these classrooms in order to fine tune the model and improve the dissemination procedures.

5. Assess student achievement levels in the pilot classrooms at both sites, as judged by teacher-collected and tester-collected data.

Work Plan, Products and Resource Requirements

Goal 1: Specification of curriculum objectives, materials, and activities

Task 1.1: Specify curriculum areas in which Joint Model learning sequences will be available for grades K-3. Completion date: October 15, 1979.

Task 1.2: Review existing learning sequences (including commercial materials) from each of the two Follow Through models to determine suitability for inclusion in Joint Model (Kindergarten) and select these sequences. Revise entry and exit criteria for learning activities trhough cross-sponsor discussion. Completion date: November 30, 1979.

Task 1.3: Specify learning sequences for grades 1-3. Completion date: August 15, 1980

Goal 2: Develop Student Progress Management System

Task 2.1: Specify overall characteristics and operation of the progress management system, grades K-3. Completion date: November 15, 1979.

Task 2.2: Develop/review weekly Individual Progress Report formats for each curriculum sequence (K level). Completion date: December 15, 1979.

Task 2.3: Establish recording and reporting procedures for student progress date (K level). Completion date: December 15, 1979

Task 2.4: Develop WIPRs and recording/reporting procedures for grades 1-3. Completion date: August 15, 1980.

Goal 3: Implement Pilot Version of Joint Model at K Level at Two Sites

Task 3.1: Prepare Orientation for field site staff. Completion date: October 30, 1979.

Task 3.2: Introduction and orientation for field site personnel. Completion date: November 15, 1979

Task 3.3: Cross-site visits by teachers and curriculum assistants (Waukegan - Chicago) to observe single-sponsor model Kindergartens of the other sponsor. Completion date: November 30, 1979.

Task 3.4: Prepare training materials for site personnel. Completion date: November 30, 1979.

Task 3.5: Inservice seminar for Waukegan and Chicago Joint Model staff. Completion date: December 15, 1979

Task 3.6: Begin operation of one Kindergarten Joint Model class in Waukegan and two in Chicago. Completion date: January 7, 1980.

Task 3.7: Monthly curriculum meetings involving Waukegan and Chicago teachers, trainers, and sponsor field representatives. Completion dates:

- January 31, 1980
- February 29, 1980
- March 31, 1980
- April 30, 1980
- May 31, 1980
- June 15, 1980

At these monthly sessions the following will be accomplished:

a. Review of implementation progress and problems from teacher's perspective.

b. Curriculum assistant and field representative feedback to teachers and one another (including review of implementation data).

c. Review of child progress data.

d. Recommendations for revisions of the model.

e. New implementation goals for the coming months.

Each of the above will be documented and reported to OE as well as the sponsors.

Goal 4: Monitor Implementation to Fine Tune the Model and Dissemination Procedures

Task 4.1: Adapt Implementation instrument from Behavior Analysis Implementation Record, High/Scope Cognitively Oriented Curriculum Implementation Checklist, and High/Scope Classroom Assessment Record. Completion date: November 15, 1979

Task 4.2: Field Representatives document monthly curriculum meetings in Illinois (see task 3.7) Completion date: 10 days after monthly meeting.

Task 4.3: Local trainers and field consultants observe classes using the implementation instrument developed in Task 4.1.

a. Baseline on single-sponsor classes K-3 in Waukegan and Chicago. Completion date: December 10, 1979

b. Monthly observation of Joint Model Kindergartens beginning of Joint Model in January, 1980.

c. Monthly reporting of implementation data to teachers, and curriculum staff.

Task 4.4: Use of implementation data in considering changes in model. (see Task 3.7).

Task 4.5: A consumer satisfaction survey will be filled out by parents (as in the current Joint Model Study phase) and analyzed by the sponsor. Completion date: August 15, 1980.

Goal 5: Assessment of Student Achievement Levels in the Joint Model

Task 5.1: Weekly child progress is summarized on WIPR forms by teachers for individual children, and summarized for class as a whole. Data are reported to curriculum staff. Completion date: each week during January-June, 1980. (WIPR data are also used to adjust work requirements for each child)

Task 5.2: Child progress on learning sequences is summarized at end of school year and included in final report. (WIPR data summarized) Completion date: July 20, 1980

Task 5.3: Local district end-of-year testing results analyzed to reveal model effects on summative achievement measures. Single-sponsor Kindergarten children compared to Joint Model students on the WRAT in Waukegan, the CTBS in Chicago. These results will be included in the final report. Completion date: August 15, 1980

Reporting

A final report would be submitted to USOE by October 30, 1980.

Quarterly Progress Reports would be submitted on December 31, 1979; March 31, 1980; June 30, 1980; and September 30, 1980.

BEHAVIOR ANALYSIS

THE UNIVERSITY OF KANSAS · LAWRENCE, KANSAS · 66045

FOLLOW THROUGH—DEPARTMENT OF HUMAN DEVELOPMENT—913-864-4447

August 27, 1979

Mr. Bernie Banet
High/Scope Foundation
600 N. River Street
Ypsilanti, MI 48197

Dear Bernie:

Thank you for the invitation to continue to work on the Joint Model Project in conjunction with the High/Scope Foundation. We believe that the work we have accomplished over the past year represents important gains in several respects.

First, we are convinced that a Joint Model, which will truly be a new educational model, is possible. Even though the philosophies of the Behavior Analysis and High Scope Models are in many respects at different ends of a continuum, we are working to solve the same problems and thus have many similarities. The combining of important, and proven components of each model into a new and hopefully viable solution to the problems found in educating Follow Through-eligible children has to a great extent been done during the past year.

Second, through the process of formulating a joint model, the Behavior Analysis staff has taken the opportunity to more closely inspect and define the components of the Behavior Analysis Model. Although this may not have been a goal of the joint model, it certainly has been an important side-benefit.

Third, the data collection associated with the project has given us some important information. Although the Behavior Analysis children scored significantly higher on the achievement measures, the High/Scope children scored better on the consumer evaluation. It is important that children achieve in school, but it is equally important

that they develop a strong positive attitude toward education that will serve them in a life-long capacity. It is also important to be aware that the results of a similar test battery administered to children in a joint model (if implemented) is an empirical question. The results of the current data collection cannot necessarily be generalized to a population that would be in a joint model.

The Behavior Analysis Model feels that because important gains have been made during the past year, continued work on the Joint Model Project is important. We are very enthusiastic about continuing to work with the High/Scope Foundation on this Project.

We appreciate the opportunity that the past year has provided, and sincerely hope we have the opportunity to go forward with this project. If further information is needed for the proposal, please contact us at 913/864-4447.

Sincerely,

Eugene A. Ramp, Ph.D.
Director

EAR:of

cc: Dave Weikart
Ann Branden

Waukegan Public Schools

Community Unit School District No. 60, Lake County, Illinois

DR. DON T. TORRESON, Superintendent

MR. HARRY S. BOWEN
Associate for Supportive Services

LINCOLN CENTER
FOR EDUCATIONAL SERVICES
1201 NORTH SHERIDAN ROAD
WAUKEGAN, ILLINOIS 60085
(312-336-3100)

August 10, 1979

Dr. Gene Ramp
Project Advisor
Dept. of Human Development
UNIVERSITY OF KANSAS
Lawrence, Kansas 66044

Dear Gene:

May this letter serve to encourage your staff to seek funding to pursue and implement a Behavior Analysis-High Scope Joint Model.

Waukegan would be interested in further discussion regarding consideration of the Joint Model at our Follow Through site.

Sincerely,

Harry S. Bowen

HSB/sjf
cc: M. Stivers

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District Superintendent of Schools

August 6, 1979

Dr. David P. Weikert
President - Sponsor
High/Scope Educational Research Foundation
600 North River Street
Ypsilanti, Michigan 48197

Dear Dr. Weikert:

A meeting was conducted in Chicago on July 18, 1979 at which the proposal for the Chicago - Waukegan area was reviewed.

After careful consideration, the Chicago Follow Through site (Howland - Lathrop) and Dr. Joseph W. Lee, District Nineteen Superintendent, heartedly approve the model plan as presented by High/Scope.

Our site administrators fully support the proposal and will begin its implementation in September, 1979.

Cordially,

Joseph W. Lee,

Joseph W. Lee

JWL:pn

cc: Dr. Charles Hohmann
Mr. Sam Hannibal
Mrs. Velma Thomas
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Mrs. Anita Moore
Mr. Louis Swanson

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